BULLETIN
of the
Chicago Herpetological Society

Volume 35, Number 11
November 2000

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Cover: Western diamondback rattlesnakes, *Crotalus atrox*, longer than five feet have huge, thick bodies and are impressive animals, but are rarely encountered. Roger Repp posed with a particularly large diamondback found north of Douglas, Arizona. Photo processing by Stephen L. Barten, D.V.M.

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Membership in the CHS includes a subscription to the monthly *Bulletin*. Annual dues are: Individual Membership, $22.00; Family Membership, $25.00; Sustaining Membership, $50.00; Contributing Membership, $100.00; Institutional Membership, $38.00. Remittance must be made in U.S. funds. Subscribers outside the U.S. must add $12.00 for postage. Send membership dues or address changes to: Chicago Herpetological Society, Membership Secretary, 2060 N. Clark Street, Chicago, IL 60614. Publications are sent to U.S. members via third class bulk mail; the post office does not forward such mail, even if a special request is made to forward magazines.

Manuscripts published in the *Bulletin of the Chicago Herpetological Society* are not peer reviewed. Manuscripts should be submitted, if possible, on IBM PC-compatible or Macintosh format diskettes. Alternatively, manuscripts may be submitted in duplicate, typewritten and double spaced. Manuscripts and letters concerning editorial business should be sent to: Chicago Herpetological Society, Publications Secretary, 2060 N. Clark Street, Chicago, IL 60614. **Back issues** are limited but are available from the Publications Secretary for $2.50 per issue postpaid. **Visit the CHS home page at <http://www.Chicagoherp.org>.**

The BULLETIN of the Chicago Herpetological Society (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society.

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Bull. Chicago Herp. Soc. 35(11):249-262, 2000

Lions and Tigers and Monsters, Oh My!
An Arizona Herping Vacation

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No need to exaggerate. The truth is unbelievable enough. —R. Repp

I had mail.

And thus our fourteenth annual herping trip began, at least for me. The 14 Chicago-based participants had different schedules, so some went early while others stayed late. Gery Herrmann and his teenage son Ben flew to Tucson a day before the rest of the group and met up with resident Roger Repp. Roger is well known and well respected in the Arizona herpetological community, has vast field experience in Arizona, and is a former Illinois resident and current CHS member. The email I had was from him, and it was sent the morning after Gery and Ben arrived in Arizona. It could only mean one thing: fabulous luck the first night. Once again I had missed out on the best herping. Roger's message was brief but to the point.

<< I knew you were just DYING to know how Gery, Ben and I did last night. Three Gilas, [Gila monsters] a tiger [rattlesnake], two *atrox* [western diamondbacks], a Sonoran whipsnake, and a VERY close brush with a mountain lion. Ben found all the snakes and a Gila, Gery got two of the monsters, and I didn't contribute squat—except for being the closest one to the lion (less than ten feet—yehaw!) >>

Lions and tigers and monsters, oh my. Yehaw indeed.

On the one hand, this was an auspicious start to another herping adventure. On the other hand, I was concerned that all of our luck for the trip had been used up the first night. How could we ever duplicate an evening like that? There are 11 species of rattlesnake in Arizona, and with Roger's guidance in 1997 we had seen eight of them. The only one I didn't see myself was the tiger rattlesnake (*Crotalus tigris*), and I was eager to find one on this trip. Now, not only had Gery, Ben and Roger seen a tiger that first night, but they saw Gila monsters (*Heloderma suspectum*) too. Gilas are another highly prized species I'd never seen in the wild, nor had they ever been seen on any of our prior herping trips to the Southwest. It's rare to encounter a single Gila, let alone three, and it was unrealistic to hope for similar success later in the trip.

Although the rest of us missed it, Roger's eyewitness account of that evening is fantastic.

§

What a buddy my esteemed co-author is! First, he steals my thunder by announcing what was found the fateful night of July 27, and then he tells me to write about it! *Anybody* can tell a good story when the cards aren't on the table. It takes a *craftsman* to tell one with Steve as a co-author.

A successful herping excursion requires several factors. Location is always number one. Weather factors are number two. Timing is number three, and personnel is number four. Somewhere threading factors one through four is the magical ingredient called "luck."

On the night of July 27, location wasn't an issue. The place Gery, Ben, and I hooked up was a proven location—the best producing desert canyon that I have found in 12 years of seeking ultimate desert canyons. Nor was the weather an issue. The morning dawned hot and clear. As the day progressed, a few clouds appeared on the horizon. These clouds in turn soon attracted many "cloud buddies." There was a brief period of rain in the mid afternoon, and then, (most importantly), the clouds held together. While holding together, they held the heat of the day on the desert floor. Timing was not an issue. Experience has taught me to be at *any* desert canyon one half hour before sunset. While I have only been out with Gery on a couple of occasions, these couple of occasions were enough for me to observe that he is a *thorough* field guy. And luck has never been an issue with Gery. He is one of the luckiest people I've ever met!

It's always fun to arrive at a rendezvous a few minutes early to scope the scene out. I was to meet Gery and Ben at an obviously located restroom in a busy parking lot. My arrival 10 minutes ahead of schedule gave me opportunity to scout the many vehicles and faces of a busy state park's parking lot. It didn't take long to zero in on this kid standing beside a green sports utility vehicle. The kid kept looking nervously at the restrooms, and checking his timepiece. While I hadn't ever met Ben, I was pretty darn sure I was looking at him. It wasn't until I saw his father heading in his direction that I went over to introduce myself.

Following the usual cordial greetings, the pre-herping fumbling was epic. Enough flashlights to fuel a Manhattan blackout were stuffed into day packs, along with cameras, rain gear, snacks, and various high tech herping gear the likes of which I've never seen before. While I jumped up and down, wetting both pant legs with impatience to be moving, I watched a flurry of packing and unpacking and re-packing until, at length, all was deemed ready.

The first stage of the loop hike requires one to walk up a busy paved road. While the road is closed to vehicles, it is always packed with hikers, joggers, and bicyclists, especially during Arizona's "golden hour"—that time period one half hour before sunset. I was pleased to note that our young companion Ben kept his head on a well-hinged swivel, as I didn't want him to miss some of the finer points of the foot traffic blowing by us. In spite of the eye candy, our pace could best be described "breakneck" along this thoroughfare.

Once we turned off the beaten path, I gave pause for long enough to eject a now worthless piece of black lung tissue, and admonished Gery and Ben to "slow down and smell the roses a bit." While there were no fragrant roses about, the metaphor was not lost on my Illinois soul mates. They beheld a canyon with a narrow trail winding upwards at its bottom, its steep, flanking hillsides abundant with stately saguaro cacti and many other forms of lush plant life both harsh and magnificent, and noted abrupt rock formations thrust upwards in helter-skelter fashion. To their credit, in no time flat, they were weaving a herpetological tapestry about me as I walked up the center of the trail.

Just as the day met night, just as the flashlights left the packs and began their erratic sweepings of the canyon's underpinnings, the kid struck first.

"Rattlesnake!" Ben cried from somewhere behind us.

"What kind?" (Two inquiring minds wanted to know.)

"Uh—I don't know. It's, well, it's kind of a banded one."

"Shoot, I think he's got a tiger," I announced to no one in particular.

There was the crashing of brush and thudding of feet as Gery ran back to look at what Ben had found. My own slow roll back to the scene was to the tune of enthusiastic accolades of father to son. Yup, the kid had found a tiger all right! Right out of the chute!

My notes highlight the particulars:

"Tiger Rattlesnake, 8:01 P.M., 22" female, rattle: basal plus five, broken/slightly tapered. Cactus Picnic Trail, just west of rock pile, crawling under limber bush when found."

The notes *don't* say it all. They don't share the elation of somebody who has sought and found a thing of value. Gery had been on the trail of the tiger for many years, and he was unashamed to show some enthusiasm over the triumphant moment. Hence, there was much macho backslapping and electric camaraderie surrounding the hapless little rattlesnake. Photos were snapped, last, longing looks transpired, and the hunt was back on again. The tiger was left as found, as it should be. All was well with this evening—but it was just beginning.

Sixteen silent minutes of bobbing and weaving through the harsh terrain continued, with all guns silent. And then it was Gery sounding off:

"Gila!"

Even though I've seen or been with people seeing over one hundred Gila monsters through the years, my response is always the same:

"No kidding?"

"No kidding! It's a Gila all right!"

More photos. More back slapping, and more shared joy over the experience of finding a 16" long orange and black lizard out prowling about the desert floor. This is called fun!

For the next hour, there was nothing shaking. This wasn't due to any lack of effort on the part of my comrades. While I stuck to the trail, they continued to flank me, their flashlights cutting sweeps of light in every direction. I was duly impressed with the effort these two were applying, and knew it would merely be a matter of time before someone scored again.

We reached a point where the trail hooked a sharp right turn, and another trail angled in to join ours. Gery had somehow worked his way to the side trail, and was about ten meters behind me. Ben was nowhere in sight. This evoked comment from me, and inspired Gery to give a manly bellow:

"Hey Ben!"

Our only answer to immediately come back was an ungodly, shrieking "MMMMEEEEYYYOOWWWLLLL-r-r-r-r-r-r-r." (Didn't sound much like Ben to either of us.)

"What was that?" Gery asked.

"Oh, I think it was a javelina," Mr. "Always Right" here answered. Javelinas, or peccaries, are small, hairy, wild pigs that often travel in packs.

"Hey Ben," Gery hollered again.

"Right behind you," came Ben's response. "What was that noise I heard . . . ?"

"MMMMEEEEYYYOOWWWLLL-r-r-r-r-r-r-r." Whatever it was, it was getting closer! The first "M'yowl" was 50 meters away; the second was now 20 meters away.

"I think it's just javelina," I replied, with less assurance than felt with the first diagnosis.

At this point in the discussion, a large hackberry bush a meter or so in front of me exploded. Something brown, large, and *fast* emerged from it, and bounded down trail from me. Even though my light was on it the whole time, it was far to fast to positively identify.

This evoked no small amount of discussion amongst the three of us, but I still stubbornly stuck with my "javelina" theory. We continued our hike, and cut down into a large canyon bottom. Five minutes later, Gery discovered a deer carcass. I refer to my notes for the evening:

"The white-tailed deer had a wound roughly two inches wide by eight inches long on its rump, just above the tail. Claw marks had ripped wounds to either side of the rear third of the body. The neck area had no external signs of damage, but was broken, and caked with dirt for about 300 millimeters below the head. The neck fur appeared "poofy," kind of roughed up some. There is no question that it was lion kill, which sets up the likelihood that the cat heard us coming, dropped its already dead prey item, and came towards us! Yikes!"

Yes, it is a little chilling to think that the big cat came our way. But we probably weren't in any real danger; it is not likely that a mountain lion would attack three people—especially when it already had a meal. It was probably trying to scare us off its kill. The feline terrorist tactic might have

worked, had not one member of the party misidentified it as a javelina!

Needless to say, we did not tarry long by the deer carcass. Our feet carried us swiftly down canyon.

I reached the paved road well ahead of Gery and Ben. I waited for about 15 minutes, and then heard Ben sound off again. It took a while for me to work my way back to where Ben and Gery had gathered, but was rewarded for the effort by seeing my very-first-ever "after dark" Sonoran whipsnake (*Masticophis bilineatus*). Seeing this species of snake in daylight is a rare enough sight in this area, but finding one after dark was most noteworthy.

Ben had found this snake sleeping in a catclaw bush, roughly one meter off the ground. As Gery began to haul out his camera for photos, the snake decided to wake up and quickly crawl off, leaving the moment undocumented on film. This was very inconsiderate of the spoil-sport snake, and the appropriate objections were raised at this point in time. Said objections fell on the deaf ears of a fleeing whipsnake.

To record a "blow-by-blow" accounting of what further developed this evening would be rather exasperating to both reader and author. But it might be an appropriate lesson in the importance of note taking to at least mention what I have down for the remainder of the night:

"*Atrox*: 10:25 P.M., 32 inch male, rattle: basal plus five, tapered, complete. West side of paved road."

"Gila 2: 10:31 P.M., 17" long, east side of paved road."

"*Atrox* 2: 10:42 P.M., coiled west side of trail, 36 inch male, rattle: basal plus ten, complete."

"Gila 3: 10:55 P.M., 15" long, on trail .2 north of parking lot."

"It has been seven-and-one-half years since three Gilas have been found in one trip."

In closing the books on July 27, it should be pointed out that the guide performed his duties flawlessly. He certainly could have found everything on his own, but what fun would that have been for his guests? It is far better to let them "think" they found everything on their own. Location, weather, timing, personnel, and luck! I was already looking forward to our next outing together.

§

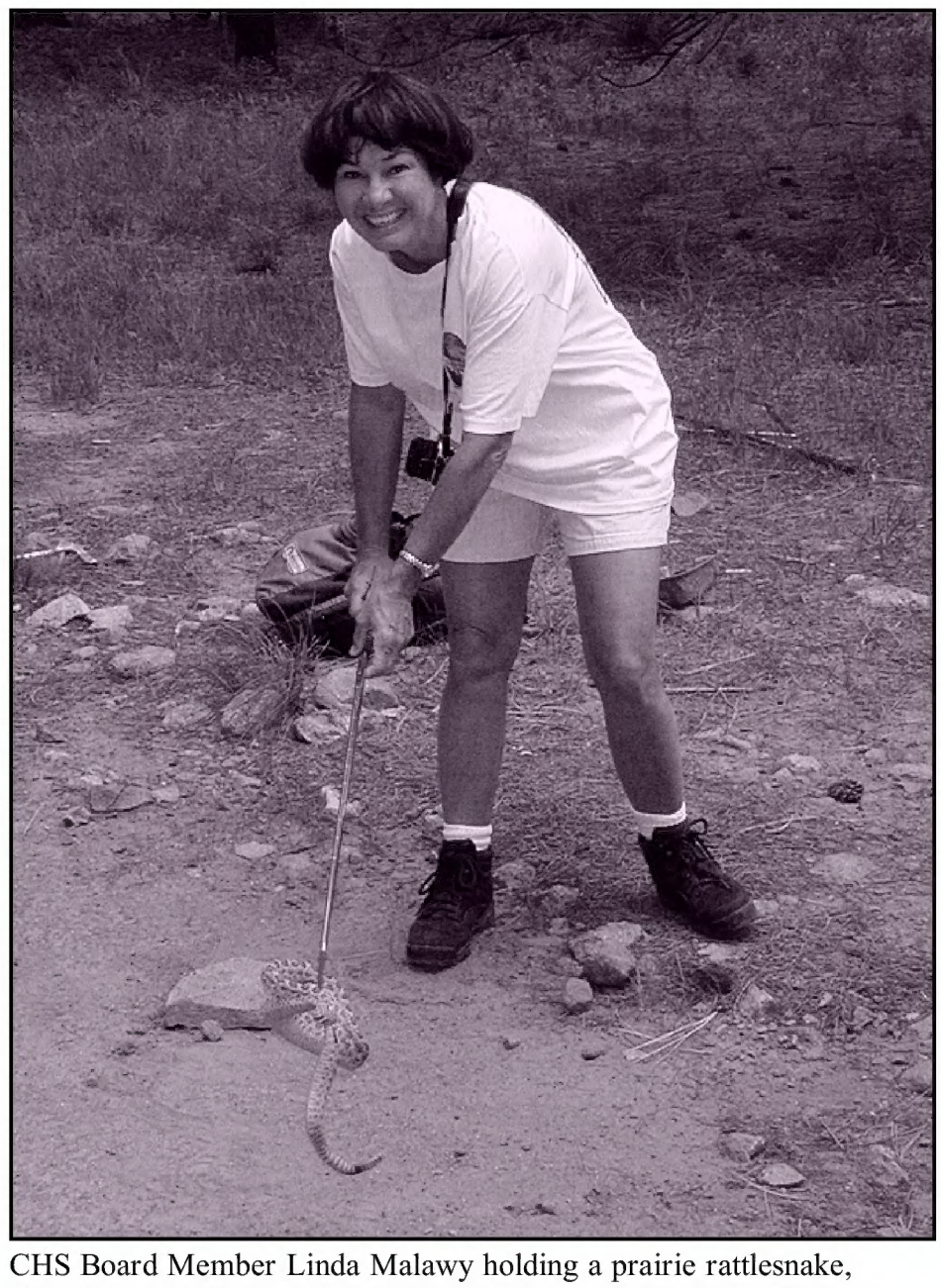
Let us return to Steve, enviously reading this account at his computer in Chicago.

Roger listed five factors that affect the success of a herp trip. With Roger's guidance, location and timing would not be a problem as the trip progressed. Weather and luck were beyond our control. However, the personnel of the trip were about to change dramatically with the arrival of 12 additional participants. Those of you who have been on family vacations, or seen the National Lampoon movies, can guess the logistic problems involved with a group of 14 herpetologists and seven cars in the field. Imagine getting a group that size to be ready for meals or travel at the same time. Imagine the potential for disagreements on where to eat or where to stay or where to hunt. Imagine getting separated on the way to a destination. The potential for disaster was great.

The potential never materialized.

This was a very congenial and, for the most part, field-tested group. Most of the participants had been on the majority of our 13 prior annual field trips. Four past presidents of the CHS were included: Mike Dloogatch, Ron Humbert, Joan Moore, and me. Four second-generation members came along: Ron's adult son Dan, Gery's son Ben, and my teenage sons Keith and Alex. Longtime members Ralph Shepstone and Mel Bruns joined us, as did Sergeant-at-arms Greg Brim. Ralph's friend John Jackson and Steve's friend and colleague Rich Funk participated. The only neophyte was Board Member Linda Malawy. She proved to be a skilled and enthusiastic critter-finder. She also generously shared her tweezers (to extract cactus spines) and her Gatorade on a long, hot hike when others ran out of water. We were glad she came along, and hope she will endure our company again someday.

The majority of this group flew to Phoenix the day after Gery and Ben's successful night, then drove to Sierra Vista southeast of Tucson. Sierra Vista is at the foot of the Huachuca Mountains in southeastern Arizona. The famous Ramsey Canyon is here, made popular as a herping destination by Carl Kauffeld's books on snake hunting (1957, 1969). It is now owned by the Nature Conservancy and visited mostly by birdwatchers eager to see rare hummingbirds and trogons.



CHS Board Member Linda Malawy holding a prairie rattlesnake, *Crotalus viridis*, on a hook during a photography session. Linda's enthusiasm is obvious. Photograph by Stephen L. Barten, D.V.M.

Ramsey Canyon also is home to the Ramsey Canyon frog (*Rana subaquavocalis*), a unique relative of the leopard frog found nowhere else. The males of this species have evolved to call for mates while underwater. Desirable snakes found in the Huachucas include the montane (mountain-dwelling) rattlesnakes, of which there are three: the twin-spotted rattlesnake (*Crotalus pricei*), the rock rattlesnake (*Crotalus lepidus*), and the ridgenose rattlesnake (*Crotalus willardi*).

All three montane rattlesnakes rarely exceed two feet in length. They enjoy healthy populations where they are found, but they live only in a few isolated pockets and are in great demand for the pet trade, making them vulnerable to persecution and collection. Thus all three are protected in Arizona. Even though our group purchased non-resident Arizona hunting licenses to allow us to collect snakes, we were not allowed to "possess" these rattlesnakes for others in the group to see and photograph. Instead, we would have to enjoy them where they were found.

Pyros (the Arizona mountain kingsnake, *Lampropeltis pyromelana*) also are found in the Huachucas, and tricolored kingsnakes are the highlight of any herping trip. Though pyros are not encountered as frequently as montane rattlers, they can be found on occasion and we hoped to see one.

Our usual procedure is to hike in the canyons at higher elevations during the heat of the day, looking for montane rattlesnakes and pyros, then cruise the less traveled roads around Sierra Vista at night, looking for other species of snakes crossing the road. Although a large group always takes longer to do anything than a small group does, it has the advantage of covering more ground and thus finding more snakes than a small group.

Although I knew the Huachucas to be productive, my personal schedule forced me to fly to Tucson the day after the big group arrived. Rather than join the larger party immediately, my boys and I also took advantage of Roger Repp's hospitality and met him to cruise his Sanctuary Road outside of Tucson. This is a private, gated, blacktop road that extends 12 miles from the desert floor to the top of a mountain, crossing through snake-infested rocky slopes. The mountain is on Reservation land, so collecting is not allowed, but that was fine with us since we were taking only pictures. Roger's job allows him access to this road, and he commonly sees tigers, blacktail rattlesnakes (*Crotalus molossus*), *atrox*, lyre snakes (*Trimorphodon biscutatus*), and pyros there. He also has seen a few green rat snakes (*Senticolis triaspis*) on this road. I had high hopes of seeing something good—perhaps my elusive tiger—after the luck Gery and Ben enjoyed the first night. Even if the Sanctuary Road was a bust, the road to get there traverses excellent desert habitat, and also is a good one on which to find snakes.

The Sanctuary Road was a bust. So was the excellent road leading there. On the way out, we saw a single DOR (dead on road) coachwhip snake (*Masticophis flagellum*) and a tortoise foot, but that was all. Yes, I said tortoise foot. Roger stopped for something in the road and it proved to be the severed foot of a desert tortoise (*Gopherus agassizii*), like some macabre good-luck charm. Can you count the species as having been seen on the trip if you only find its foot? In spite of that bit of weirdness, the evening started off looking very promising. However, our luck ran out when Roger's Factor Number Two: Weather, turned against us. A storm blew up, causing the temperature to drop and the wind to blow fiercely. Snakes don't tend to move in those conditions, and we only saw two of them. The first was a Sonoran gopher snake (*Pituophis melanoleucus affinis*), which might be thought of as a sort of western bullsnake. The other was a night snake (*Hypsiglena torquata*), a small, drab, generally common snake, although it is both rear-fanged and cat-eyed. My boys were excited to be snake hunting, but disappointed with the initial results. It appeared that Gery and Ben had used up all the karma for the trip that first night after all.

The next morning we got up early and followed Roger to a known hot spot for montane rattlesnakes, where we met up with the rest of the group. The directions to get there are precise: it's almost exactly halfway between Alaska and northern Argentina. This planned rendezvous had the potential for problems, as any of the eight cars (our seven plus Roger) easily could have gotten lost, been late or not shown up at all. Instead, almost incredibly everyone arrived at the designated spot within five minutes of one another. Roger, leading the way, whipped his pickup down into a deep roadside ditch, up the steep embankment on the other side, and jetted down a two-rut, rock-strewn trail to a shaded turnaround for parking. Gery followed in his rented SUV. My boys and I were next, in our white Chevy Malibu.

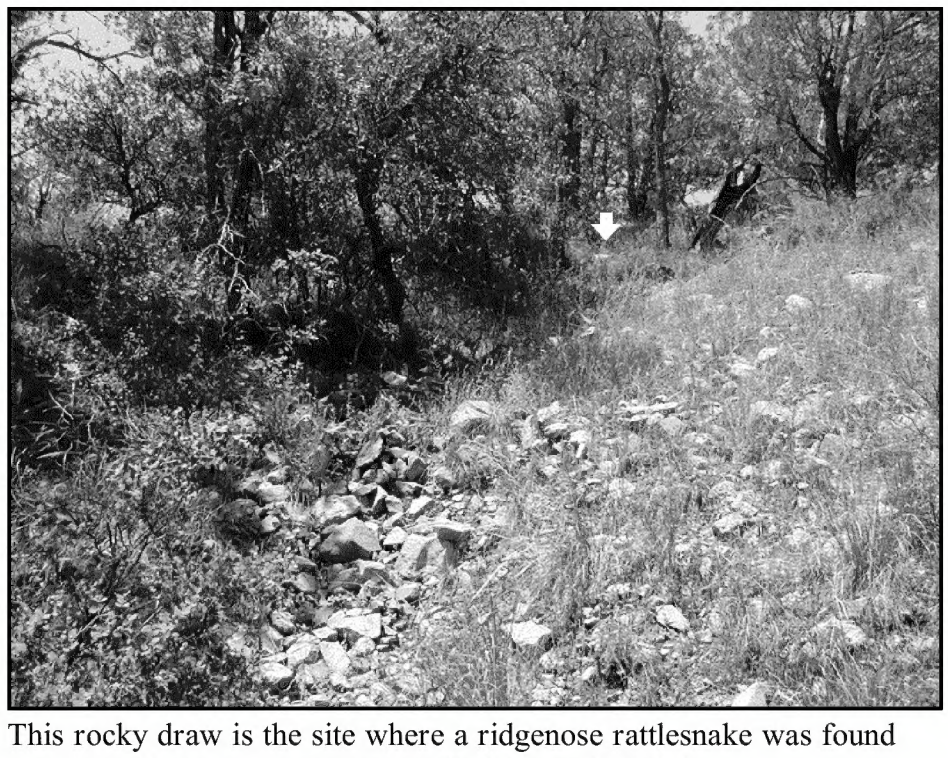
Allow me to digress. On trips such as these, our motto has always been, "If it's a rental car, it's all-terrain." On past trips, we've driven through deep mud and over rocks and down impassable roads. We've gotten stuck, punctured a radiator, and been billed $75 for cleanup inside and out after a week in the swamps. This situation was no different.

I gunned it, following without hesitation. The nose went down as I entered the ditch, then up as I climbed the embankment. The Chevy lacked the ground clearance of a pickup or SUV and I hit bottom with a sickening crunch. The tailpipe also scraped, but we kept going. The two-rut road was little better, and we swerved around and through a couple of deep gullies, bouncing large rocks off the undercarriage with palpable thumps. The five other cars followed. No warning lights appeared on our dash, and when we stopped the boys checked for damage but saw nothing hanging loose or dripping under the car. Surprisingly, Roger's rugged pickup got a flat tire while the rental cars remained unscathed. He told us later that there was a tire defect (hey, Roger, was it a Firestone?) rather than a road hazard; nevertheless I took the precaution of letting the boys out to increase ground clearance as we exited through the same ditch. They said our car and most of the other rentals went three-wheeling, with one tire a foot off the ground, as we each cleared the ditch.

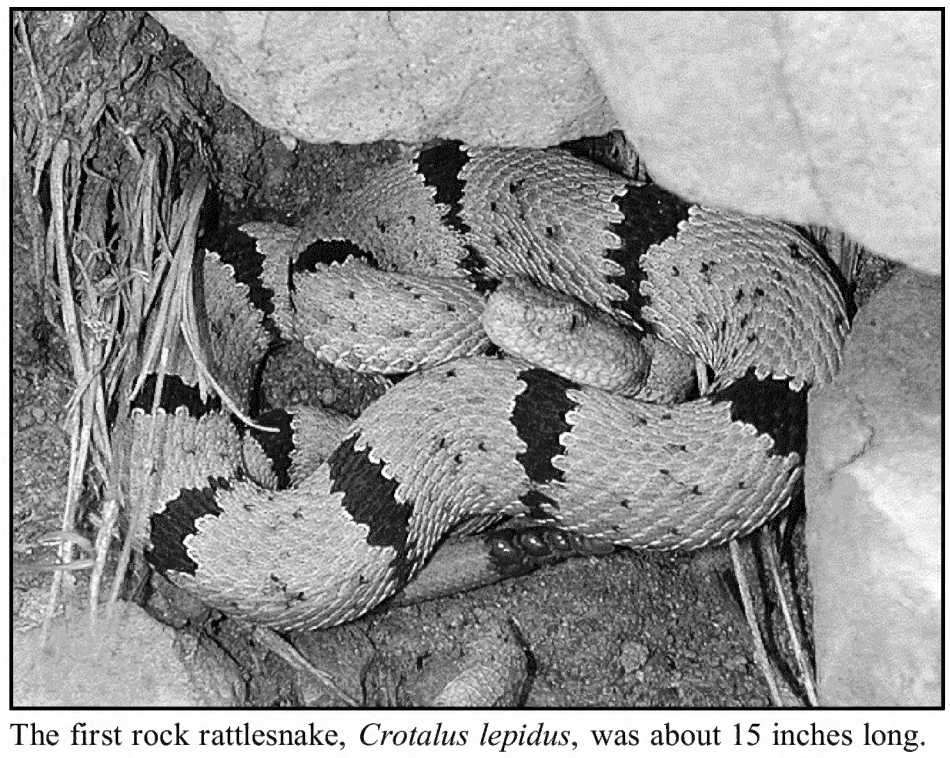
Getting back to the montane rattlesnake spot, Roger gave us an introduction to the canyon. He admonished us both to return any turned rocks or logs to their original location and to avoid collecting, so that future visitors might enjoy the same

The ridgenose rattlesnake, *Crotalus willardi*, has bright white "flash" markings on its face. The ridge above the nose that gives this snake its name is also visible. Photograph by Stephen L. Barten, D.V.M.

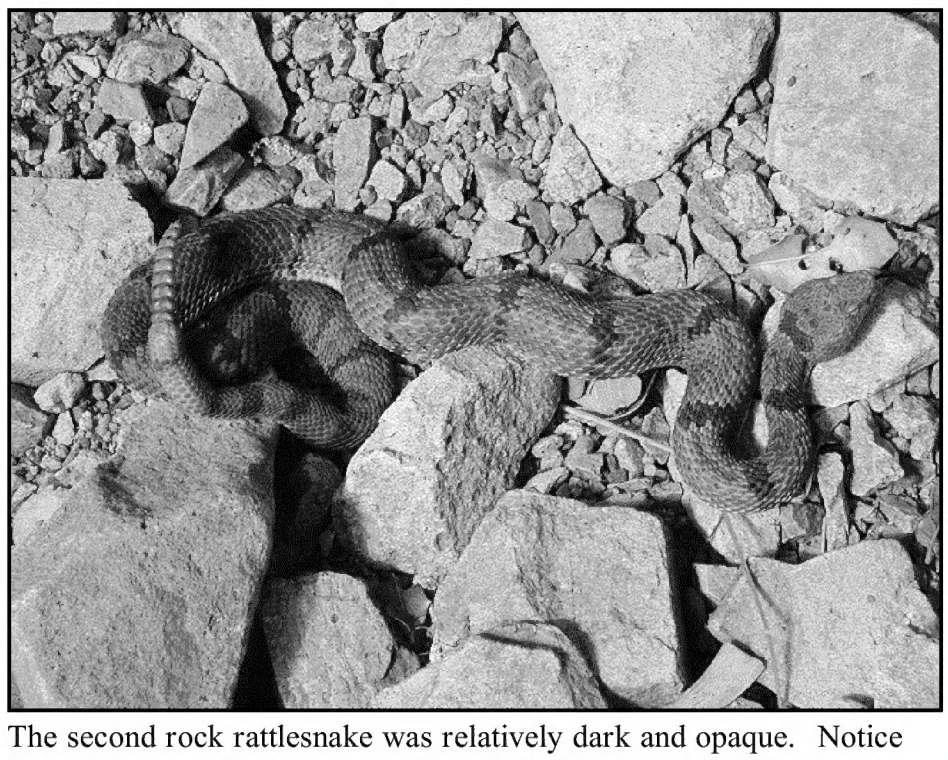
This ridgenose rattlesnake was about 16 inches long. It was discovered in a resting coil and chose not to rattle when approached. Photograph by Stephen L. Barten, D.V.M.



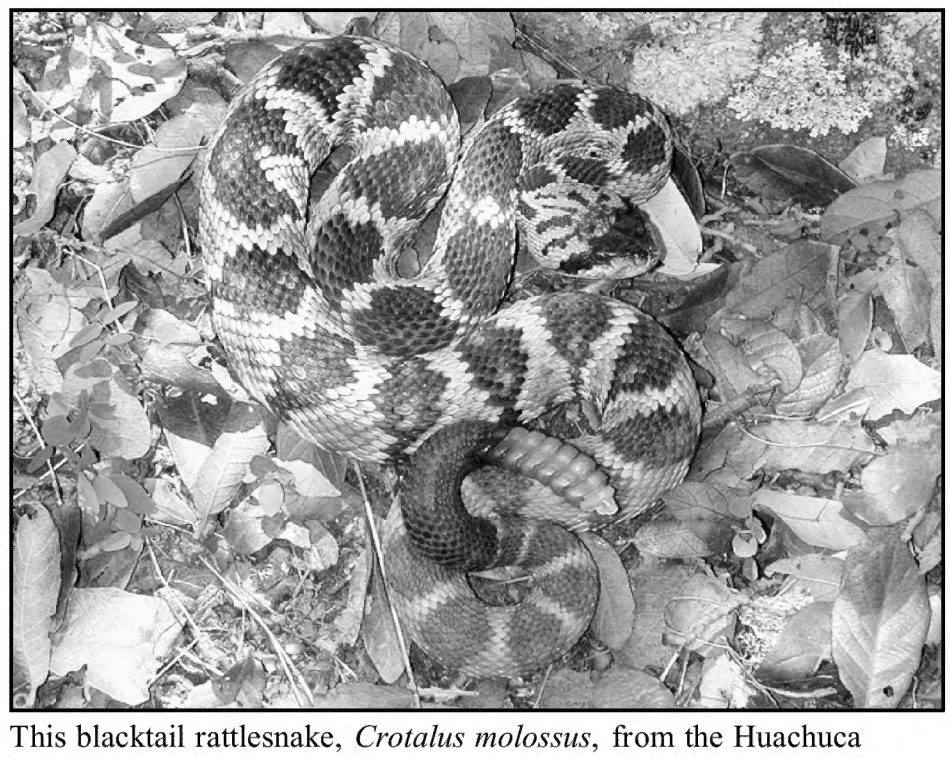
This rocky draw is the site where a ridgenose rattlesnake was found (arrow). Photograph by Stephen L. Barten, D.V.M.



The first rock rattlesnake, *Crotalus lepidus*, was about 15 inches long. A pretty snake with a light background, it took refuge in a shallow crevice. Photograph by Stephen L. Barten, D.V.M.



The second rock rattlesnake was relatively dark and opaque. Notice the milky eye. Photograph by Stephen L. Barten, D.V.M.



This blacktail rattlesnake, *Crotalus molossus*, from the Huachuca Mountains in southeast Arizona has contrasting yellow-gold and satin black colors. Carl Kauffeld called them the "the most beautiful of all rattlesnakes." Photograph by Stephen L. Barten, D.V.M.

beauty we were about to see. The canyon was nothing if not beautiful. It was different than what most of us picture as typical Arizona. The ground was grassy, with scrub oaks providing shade. A clear stream with a rocky bed bubbled lazily along down to the road. Humidity was in the air, and dragonflies flew around our heads. Several rocky draws entered into the main canyon, and it was here that we would search for snakes. The temperature was in the upper 70s although it approached a sweltering 100 degrees down in Tucson.

When Roger opened his car door, he was ready to go. Recall that he was, in his own words, "jumping up and down, wetting both pant legs with impatience to be moving" while he waited for only Gery and Ben to get ready. Imagine his frustration as 14 of us lazily greeted each other, caught up on news, and readied our equipment. To be fair, he was only invoking Roger's Factor Number Three: Timing. He knew that as both the sun and the temperature rose, the snakes would be harder to find. Also, every minute spent chatting was a minute *not* spent finding snakes. After excruciating wasted time, the group headed out.

Almost immediately, and within sight of the parked cars, Ralph found a mountain patchnose snake (*Salvadora grahamiae*) among the rocks of the creek bed. These snakes prefer higher altitudes than their cousin, the western patchnose snake (*S. hexalepsis*), and this canyon was within their usual range of 4,000 to 7,500 feet of elevation. Mountain patchnose snakes have a greenish-white or yellow stripe three scales wide running down their backs. This is bordered by two brown or black stripes, each two scales wide. The rostral scale is enlarged—the "patch"—to facilitate digging for reptile eggs, which along with rodents and lizards constitute its diet. Like most striped snakes, these are thin, fast and racer-like in appearance.

Half of the party went up the first draw, and the rest entered the second. We were pretty spread out, but stayed within shouting distance and used walkie talkies for better communication. Lizards were in abundance. Bunch grass lizards (*Sceloporus scalaris*), Sonoran spotted whiptails (*Cnemidophorus sonorae*), tree lizards (*Urosaurus ornatus*) and lesser earless lizards (*Holbrookia maculata*) were out and about, but snakes remained scarce. Greg and Rich found several short-horned lizards (*Phrynosoma douglassii*), an adult and four tiny newborns, but not together. This is one of the most widespread of the horned lizards, and one that ranges farther north and to higher altitudes than other members of the genus. One adaptation to the cooler climates in which it lives is that the short-horned bears live young rather than laying eggs, and is the only *Phrynosoma* in the United States to do so.

Our group spread out and was working its way up various draws, across several ridges and over some barbwire fences. The V-shaped draws had flat rocky bottoms, down which rainwater obviously ran during storms. The sloping sides angled up at about 45 degrees, sometimes steeper and sometimes more shallow. The sides of the draws were studded with large rocks and occasional shrubby trees. We walked along the bottoms, sides and tops of the draws, looking in crevices and listening for the telltale buzz of a rattlesnake. More than one nameless member of the group (their initials are Roger and Mike) complained that they could no longer hear the faint buzz of the tiny montane rattlesnakes and left the listening to the younger members of our group.

Suddenly from across the draw Ben yelled, "Got one!"

"What is it?" I asked, and he replied "It's a rock!" It took a while to make my way over to him. Ben was easy to find because so many people arrived to see the snake. It looked like the crowd waiting to get into a Grateful Dead concert. Camera flashes lit up the already sunny sky like lightning, and one literally had to stand in line to take a picture. This was one well-documented little snake. Ben found the snake when he heard it buzz and saw it crawl into a shallow, dead-end crevice, where it rested patiently while we took photographs.

Rock rattlesnakes are small, measuring just 15 to 30 inches long. This one was closer to 15 inches. The ground color varies greatly and often matches the color of the rocks in which they are found. The background color can be the light green of lichens, bluish gray, gray, tan or even pink. They can be plain or heavily freckled with black spots. Irregular black bands, often bordered by lighter color, ring the body. The tail is bright yellow in juveniles, which use it to lure lizards to within striking distance, and may be yellow-brown or even pink in adults. Like gray-banded kingsnakes (*Lampropeltis alterna*), some rock rattlesnakes are bright and beautiful, while others are dull and drab. Some populations of rock rattlesnake have very potent venom, but due to their small size, there are no recorded human deaths from their bite.

Ben's rattlesnake was a pretty one, with a pale, blue-gray background and little freckling. By the time the late arrivals finished with their photographs, those closest to Ben at the start had already dispersed and were spread out around the draw and over the next ridge.

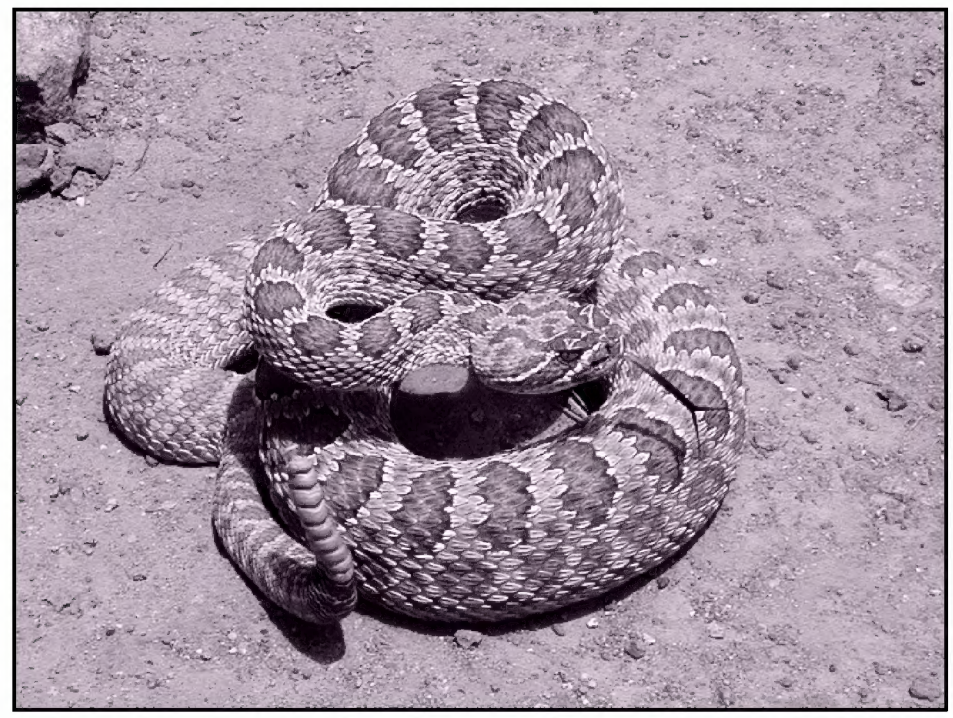
I crossed a ridge, entered the next draw and saw a promising rocky slope. I climbed the steep side of the draw following the rocks and got a bit short of breath due to the altitude. Working my way around a short, gnarled tree, I spotted a pile of rocks among the grass and angled towards it. Approaching, I saw one rock had a shaded hollow under its front edge. I leaned to my right, peered into the hollow and saw coils of snake. In a split second, several thoughts went through my mind. First, "Snake!" Second, I noticed it had light colored bands across its back. Pyro? No, it wasn't quite right. Was it moving? No, it was coiled and resting. It was a small snake, about 16 inches long and as thick as my finger. I leaned farther until I could see its head and the bright white stripes along its angular snout. It was an Arizona ridgenose rattlesnake. It never rattled, and if I hadn't spotted it, I might have walked right past it. In fact, one member of the group later said he had passed within ten feet a few minutes earlier and missed the snake.

With great satisfaction, I took a breath and yelled, "*Willardi*!"

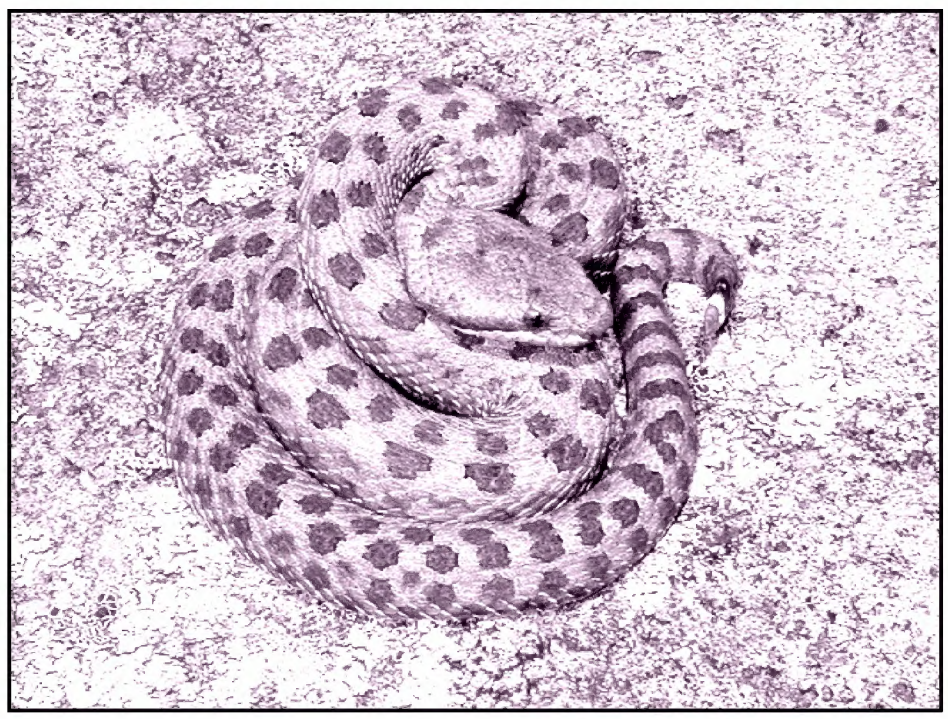
You'd have thought I had yelled, "Gold!" They came a-running.

To the non-initiated, one might wonder why this small,

A photograph doesn't do this tarantula hawk wasp justice. The wasp was three inches long, as thick as a man's thumb, and metallic black in color. Several dozen wasps were buzzing around a small flower bed at the Southwest Research Station at any given time. Photograph by Stephen L. Barten, D.V.M.

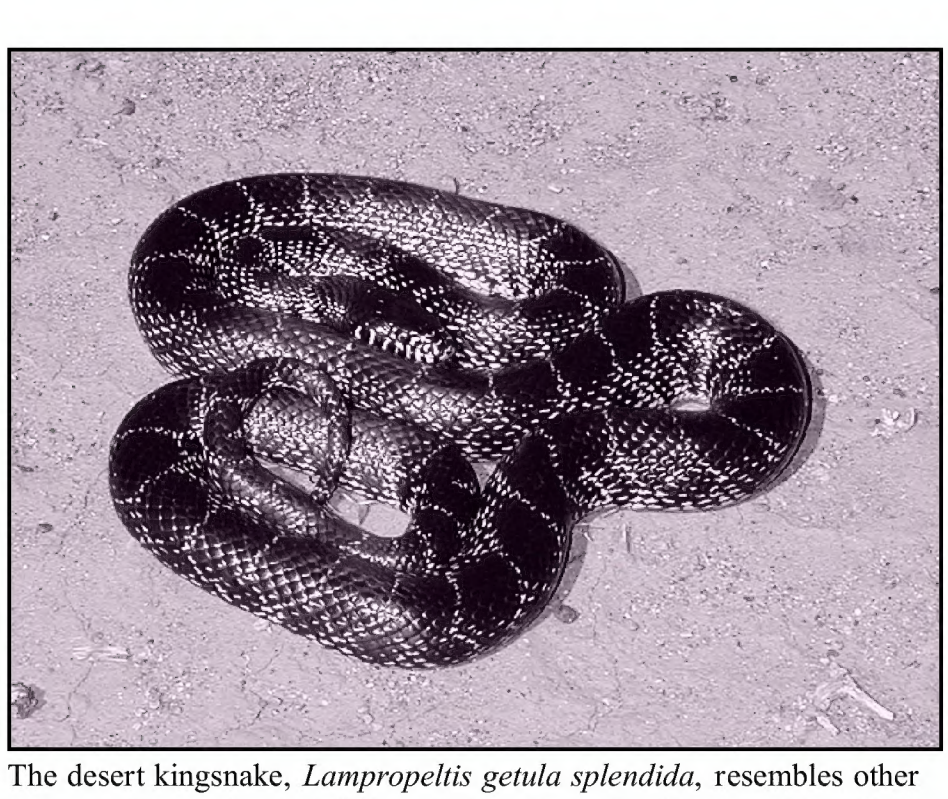


This prairie rattlesnake, *Crotalus v. viridis*, was found within the range of mojave rattlesnakes, *C. scutulatus*, and western diamondbacks, *C. atrox*. It has dorsal blotches instead of diamonds, and it lacks the vivid black and white "coontail" rings on the tail next to the rattle, which are seen in the other two species. Photograph by Stephen L. Barten, D.V.M.

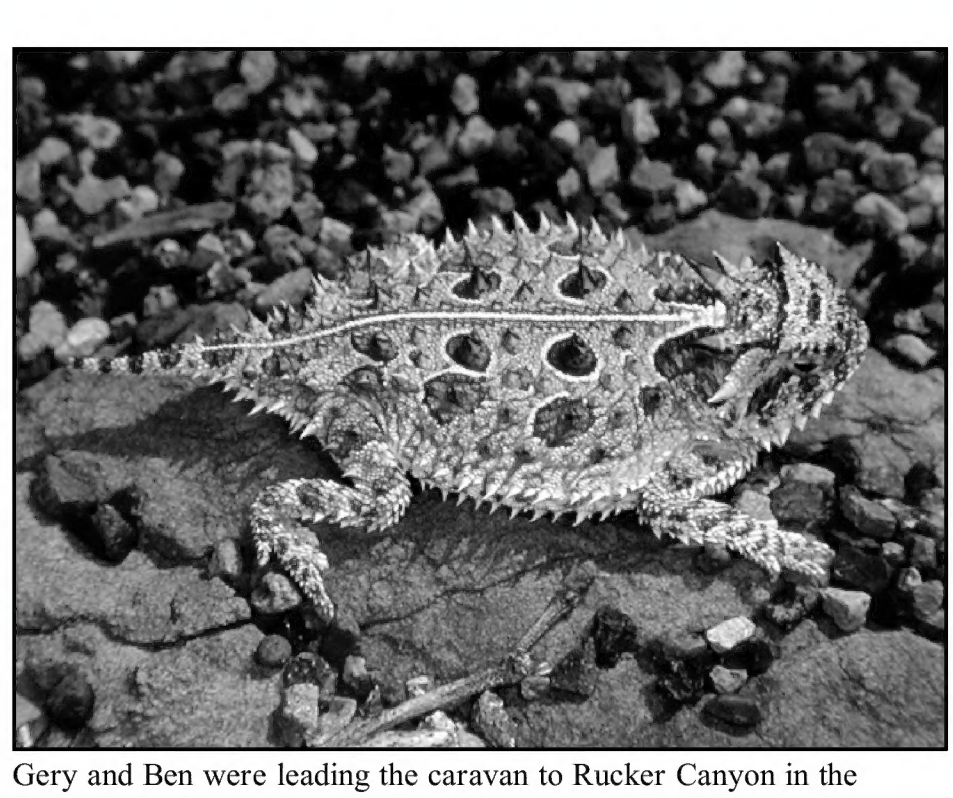


The twin-spotted rattlesnake, *Crotalus pricei*, has parallel rows of spots running down its back. This individual had different segments of its rattle painted green, black and white for future identification as part of a scientific study. Photograph by Stephen L. Barten, D.V.M.

One of several huge talus slopes at Barfoot Park, with a scenic view of the valley below in the background.



The desert kingsnake, *Lampropeltis getula splendida*, resembles other common kingsnakes but differs in its pattern of yellow speckles. It this subspecies, the yellow speckles are abundant on the sides, but only cross the back in narrow transverse lines. This leaves the appearance of a row of jet black blotches running down the back of an otherwise speckled snake. Photograph by Stephen L. Barten, D.V.M.



Gery and Ben were leading the caravan to Rucker Canyon in the Chiricahuas when they spotted this Texas horned lizard, *Phrynosoma cornutum*, basking on the road. Photograph by Richard S. Funk, M.A., D.V.M.

plain brown snake is so exciting. For one thing, it is one of the rarest snakes in the United States. Kauffeld (1957) made it a legend, describing his quest to find them. During a trip to the Huachucas in 1941, he searched extensively for ridgenose rattlers in Ramsey and Carr Canyons, and succeeded in finding just two snakes, both under the same rock. First described in 1905, Kauffeld's two *willardi* were only the thirteenth and fourteenth specimens known to science. They also proved to be the only ones he ever personally saw in the wild, in spite of a number of trips to seek them.

I found some irony in the way Kauffeld (1957) put Arizona history into perspective. The Apache wars, surrender of Geronimo, and the height of nearby Tombstone with its gunfights and outlaws seem like ancient history to us, but to Kauffeld in 1941 they occurred "only yesterday—a mere fifty or sixty years ago." Today Kauffeld's discovery of *willardi* in these same Huachuca Mountains also seems to have occurred only yesterday—that same, relatively short 60 years before our visit.

To be truthful, members of our group had seen two *willardi* of their own, including a gravid female, in Carr Canyon just the day before. Also, in 1997, Roger took a smaller group of us to the same secret canyon in which we now stood, and in two days we saw eight *willardi*. Personally, I think that *willardi* are relatively scarce or secretive in the "traditional" spots where people search for them, and that Kauffeld didn't know that there were better places in which to look. Nevertheless, even knowing where a thriving population lives, it's always a thrill to see such a rare snake in the field. Several members of the group said that this was their first wild *willardi*.

Photos were taken, and video, and more photos. This was followed by more photos, video again, and, just in case the first ones weren't perfect, more photos and video were taken. We used the walkie talkies to let the group in the other draw know about the find, and they hiked over to see for themselves. This snake was even better documented than the *lepidus*. A patient individual, the snake finally had enough of its 15 minutes of fame and retreated back into its crevice.

Ridgenose rattlesnakes are distinguished by a sharp ridge of upturned scales around their snout. This gives them a profile not unlike that of the modern Godzilla movie monster. Another montane rattlesnake, *willardi* only reaches 15 to 24 inches in length. They have a chocolate or reddish-brown background, with pale white crossbars bordered by black. The crossbars fade into the background color on the sides. Bold, irregular white stripes line the face, two on each cheek and a single vertical stripe on the front of the snout. In southeast Arizona ridgenose rattlers are found only in a few isolated mountain ranges. Nevertheless this species was voted the Arizona State Reptile by local schoolchildren, beating out the better-known Gila monster and desert tortoise.

On the way back to the cars, Linda's sharp ears picked up a buzz, and she found another *lepidus* in a tangle of dead wood and sticks at the bottom of the draw. This one was dark and opaque, with milky white eyecaps. It was roughly 20 inches in length and had a long string of rattles, indicating that it was probably more mature than the first one Ben found.

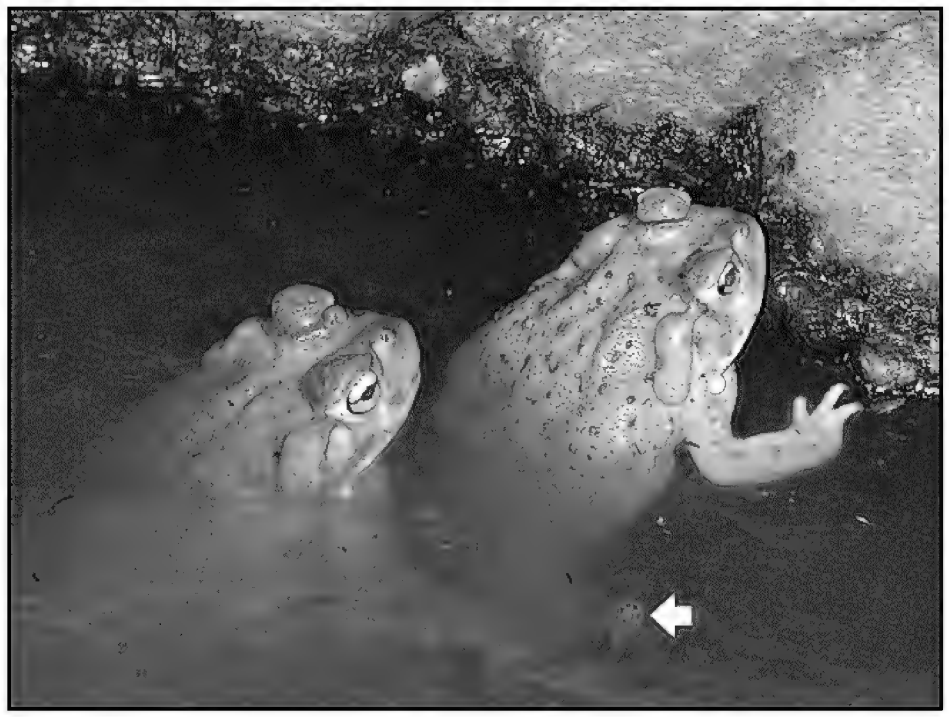
The last straggler to reach the cars was Ron, who walked up with a smug grin on his face. I had seen the grin before, and knew instantly he had found a herp of which he was enormously proud. He held up a small, drab turtle with an algae covered, pitted shell. To turtle-enthusiast Ron, this was a better find than any *willardi*, pyro or green rat snake. This was a Sonoran mud turtle (*Kinosternon sonoriense*), one of only four turtles native to Arizona. It also happened to be one of only four American turtle species Ron had not yet found in the wild himself. Nothing could have made him happier than spotting that turtle on the bottom of the clear creek.

Before we left this gorgeous canyon, Gery showed us a blacktail rattlesnake he had found during the previous night's road cruising and saved for pictures. Blacktails are one of the most widespread rattlesnakes in Arizona. A generalist, the blacktail ranges from low desert to high mountains, and they are often found in association with rock and twin-spotted rattlesnakes. As the name implies, this rattlesnake is distinguished by a dark black tail, usually without traces of bands. Also, they often have a black-tipped snout. The body is cream, gray, olive, gold or bright yellow with irregular, light-centered, dark crossbands or blotches. Adult blacktails rarely exceed three feet in length, but exceptional individuals can approach four feet.

The contrasting yellow and black colors make the blacktail one of the prettiest snakes in the American West. Those specimens from the Huachucas are the most brightly colored of any blacktails, and in fact Kauffeld (1957) called them "the most beautiful of all rattlesnakes." Gery's specimen was particularly vivid with contrasting yellow-gold and jet black colors, and once again camera after camera recorded its image while the photographers praised its beauty.

Finally every photographer was satisfied, cars were packed, and the wagon train hit the trail. Roger returned to Tucson with plans to meet up with us three nights later. Others returned to Sierra Vista to check out of their motel, while Gery took the blacktail back for release at the precise spot where he found it. Our plan was to meet later that afternoon in the Chiricahua Mountains at the American Museum of Natural History's Southwest Research Station (SWRS).

The SWRS lies in an idyllic wooded glen high above the desert floor. A huge wall of rock dominates the east skyline, and it glows with impossibly beautiful reds and golds in the light of the setting sun. The property is nestled among shade trees and a small creek trickles between the dorms and the kitchen. Signs warn visitors to watch for blacktail and rock rattlesnakes by the creek, although they avoided our company. A hose brings cool, clear creek water to a swimming pool, which stays perfectly clean due to the flow of water. Nothing is more refreshing than a dip in that pool after a hot, dusty day spent climbing rocks and talus slopes. An unmowed grassy clearing had a stand of white flowers, around which flew two or three dozen impossibly huge tarantula hawk wasps seeking nectar. These wasps are metallic black, three inches long and

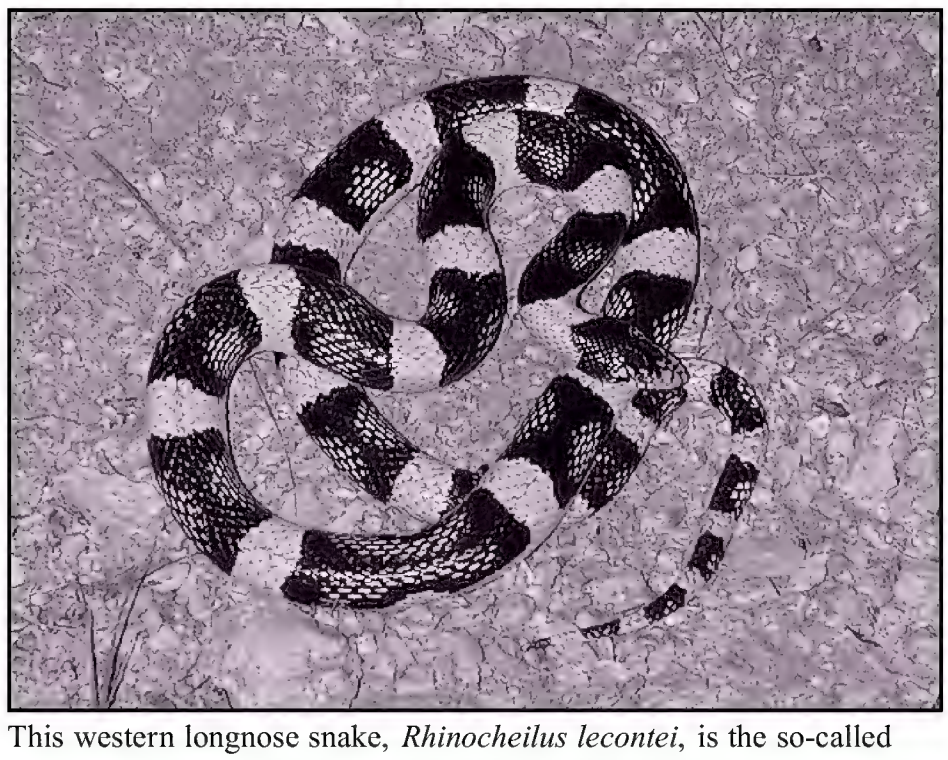


Two of the six large Sonoran Desert toads, *Bufo alvarius*, found sitting in a stagnant pool in a rocky basin during a night hike near Tucson. An unidentified tadpole, one of many, is visible in the water (arrow). Photograph by Stephen L. Barten, D.V.M.

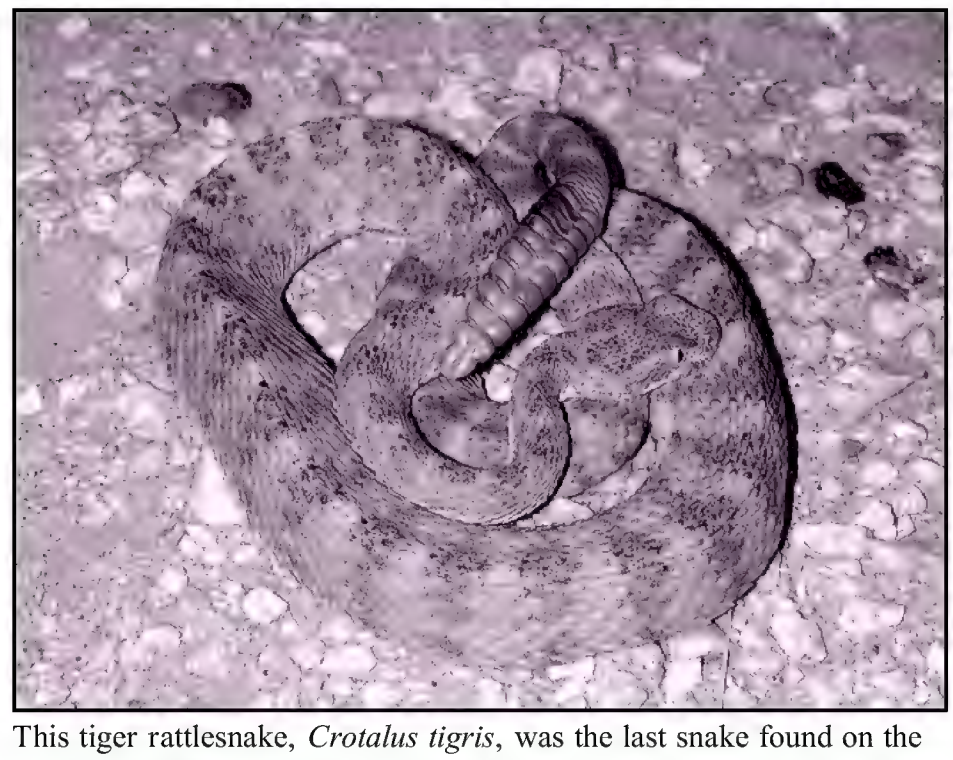
This desert tortoise, *Gopherus agassizii*, was found at the top of a relatively steep ridge during a night hike in a desert canyon. Photograph by Stephen L. Barten, D. V. M.

Joan found this Gila monster, *Heloderma suspectum*, during a night hike. It was restless, agitated, and no doubt frightened by the hikers inspecting it with flashlights. It paused momentarily as it crawled out from under a prickly pear cactus, allowing this photo, although the cactus left multiple souvenirs imbedded in the photographer's leg. Photograph by Stephen L. Barten, D.V.M.

This female collared lizard, *Crotaphytus collaris*, was found sleeping in a bush during a night hike in a desert canyon near Tucson. Photograph by Stephen L. Barten, D.V.M.



This western longnose snake, *Rhinocheilus lecontei*, is the so-called "clarus" or desert phase. It has reduced red pigmentation between the black saddles and strongly resembles a California kingsnake. Photograph by Stephen L. Barten, D.V.M.



This tiger rattlesnake, *Crotalus tigris*, was the last snake found on the trip and fulfilled the author's hope of seeing one in the wild. Note the relatively tiny head and relatively huge rattle for the size of the snake. Photograph by Stephen L. Barten, D.V.M.

as thick as my thumb. Nonaggressive towards humans, they earn their name by their reproductive strategy. The female wasp paralyzes a tarantula with her sting, then buries the still-living spider on which she lays a single egg. After hatching, the larval wasp consumes the spider as it develops underground. Clown-faced acorn woodpeckers swooped across the clearing while hosts of hummingbirds mobbed nearby feeders. Metallic copper-colored rufous hummingbirds, blue-throated hummers twice as big as the others, and less common black-chinned, broad-tailed and calliope hummingbirds were unafraid of humans. As they swooped past our heads, their beating wings made a loud buzz reminiscent of the sound of light sabers in the *Star Wars* movies.

The SWRS provides housing for researchers from around the world as they pursue fieldwork in the surrounding mountains and desert. Student volunteers work a few hours each day in return for room and board, and spend their free time assisting and learning from the researchers or conducting their own studies. Renowned herpetologist and *Phrynosoma* expert Wade Sherbrooke and his wife manage the SWRS, and it is always a pleasure to visit with these old friends. Our rooms each had five beds and a bath, and excellent buffet-style meals were included. The overflow of our large group stayed at the Portal Lodge, trading the comforts of the pool and the view for individually made-to-order, restaurant-style meals, a general store, a hummingbird station of their own and a semi-tame pack of javelinas.

At night we exited the mountains and cruised the roads through desert grasslands at lower elevations. The most productive roads were the Portal Road, Highway 80 and Highway 9, which extends into nearby New Mexico. The most common snakes here are scuts (mojave rattlesnakes, *Crotalus scutulatus*, or "scut" — pronounced "scoot" — for short) and *atrox* (western diamondbacks, *Crotalus atrox*). Both are relatively large, dangerous, coon-tailed rattlesnakes. Adult scuts rarely exceed three feet, although exceptional individuals can approach four feet in length. Most adult Arizona *atrox* are between three and four feet long, but can be much larger. Individuals approaching five feet have huge, thick bodies and are impressive animals, but are rarely encountered. We mostly saw juvenile and small adult snakes of both species. The tails of these two species have alternating black and white rings, like those of a raccoon. On the Scut, the white or light gray rings are twice as wide as the black rings, whereas on the *atrox* they are of about equal width. Other differences between the two include where the postocular stripe meets the mouth and the scalation on top of the head, but those details aren't important here. The western diamondback accounts for the most human deaths of any snake in the United States. Its venom is only of average toxicity but the volume it injects in a single bite is large. *Atrox* is a common snake with a wide distribution, and it also defends itself vigorously, so *atrox* bites are more common than bites from other species. The scut has venom up to 20 times more toxic than that of the *atrox*. Unlike most rattlesnakes, scut venom has a strong neurotoxic component that causes respiratory paralysis and death. Fortunately, the scut only injects one sixth the volume of venom as a same-sized *atrox*. Still, neither snake is one to be trifled with.

The third most common snake we encountered here was the prairie rattlesnake (*Crotalus viridis viridis*). The range of the prairie rattler extends only slightly over the border from New Mexico into the southeast corner of Arizona. *Viridis* can reach three feet in this part of its range. It lacks the coon-tail rings of the scut and *atrox*, and has dorsal blotches rather than diamonds. It also has two rows of smaller blotches along each side. The venom yield and toxicity of this subspecies is moderate.

It is interesting that three species of similar-sized rattlesnake can coexist in the same area. Gehlbach (1981) commented on the rattlesnakes between Portal and Rodeo, New Mexico — the precise area of our road cruising — being segregated by ecological niches. Like us, he found blacktails in this region to be limited to woodlands at higher elevations in spite of being generalists elsewhere in their range. *Atrox*, on the other hand, prefer lower grassland studded with mesquite and tarbush. In general, scuts prefer shorter grass, fewer bushes, and lower elevations than *atrox*. Nevertheless, in this particular region the ranges of these two species overlap substantially. Gehlbach (1981) cites a 1966 study by Harvey Pough that suggested scuts have been invading the territory of *atrox* over the last 100 years (now 135 years) in this region. He suggested that overgrazing, fire suppression and a possibly hotter, dryer climate have caused desertification, in which grassland has been degraded into shrubland. Shrubland habitat favors *atrox*, but at the same time scuts are better adapted to dry conditions and therefore have moved in. Gehlbach suggests that *atrox* are larger than scuts and eat larger prey, thus reducing competition. This factor may have been an advantage for scuts initially during their invasion, but large *atrox* are increasingly rare. The *atrox* we encountered generally were of a similar size to the scuts we saw, so this factor currently may have less importance.

Gehlbach doesn't mention prairie rattlesnakes, which we found in among the *atrox* and scuts. I presume their absence means neither Gehlbach or Pough encountered them here. We didn't see *viridis* in 1991, and only saw a single specimen in 1997. This year we saw over half a dozen. Admittedly, this sampling size is too small to be significant and may not reflect actual population trends. We may have seen more prairies this year due to weather conditions, or simply due to the fact that we had seven cars road cruising instead of only two. Nevertheless we saw enough to suspect that they are now a common species locally. We saw scuts and *atrox* before and after finding *viridis* on the road, so the three species appeared to be admixed. Are all three competing for similar resources? Our observations suggest that if this is the case, their resources seem to be plentiful. We saw kangaroo rats and mice commonly on the roads, and sometimes it appeared there was a rodent every 20 feet. Prairie–scut hybrids have been collected in the wild in New Mexico, and while scut–*atrox* hybrids occur in captivity, there is no evidence they crossbreed in the wild.

Gelbach (1981) also stated that near Portal, rattlesnakes accounted for over 70% of the snakes seen on the road. We also saw a large percentage of rattlesnakes here. He suggested

that rattlesnakes were larger than other species and thus more easily spotted than other snakes. While that may be the case, our experienced snake hunters were successful at spotting six-inch long black-headed snakes (*Tantilla hobartsmithi*) that were less than half the diameter of a pencil. He also suggested that rattlesnakes tend to lie stationary on the road, whereas colubrid snakes tend to crawl across it, thus making rattlesnakes more likely to be encountered. Roger's data spanning 11 years of field observations also support Gelbach's percentages of "rattlers vs. colubrids," and his theories as to why this is so.

Nevertheless, we did see snakes other than rattlesnakes while road cruising. Most common were gopher snakes and desert kingsnakes (*Lampropeltis getula splendida*). As many DOR snakes were seen as live ones. *Splendida*, as the name implies, is a beautiful snake. Its background color is a shiny, jet black and its sides are speckled with light yellow, reminiscent of the speckled kingsnake (*L. g. holbrooki*). The yellow speckles cross the back in narrow bands, leaving a row of unspeckled, black ovals running down the dorsum. Male tarantulas looking for mates also were commonly seen on the roads.

One of the peculiarities of snake hunting is that not every car saw the same types of snakes. One car might pass a spot seeing nothing, while a trailing car five minutes later might chance upon a great snake at the exact same spot, proving the importance of Roger's Factor Number Five: Luck. On a given night, one car might see half a dozen snakes, while another only encounters a single scut or *atrox*. Somehow my car always seemed to be in the latter group. The fog lights in Gery's SUV no doubt were an advantage for spotting animals on the road, while the fact that my headlights aimed in different directions like a person with lazy eye syndrome was no help. Nevertheless, people saved interesting specimens, both alive and dead, for photographs the next morning. The following night they released the live ones at the same mile marker where they had been captured.

During the day, we drove to Barfoot Park at the top of the Chiricahuas. This has been known for decades as a hot spot for twin-spotted rattlesnakes (*Crotalus pricei*), the third of the montane species. Kauffeld (1969) already called Barfoot "another classic rattlesnake locality," complaining that "this too . . . has been hit too hard and too often in recent years by collectors. True, the species [twinspots] is one that is plentiful in the Chiricahuas, but Barfoot is too convenient, and few if any of those collectors care to take the time and trouble to search for any other concentrations—nor do they show any restraint in the numbers they take." Fortunately twin-spotted rattlesnakes have been protected for years in Arizona, and a healthy population still thrives there in spite of repeated visits by many, many herpetologists.

Pricei and *lepidus* are similar species of rattlesnake, both preferring rocky habitat at higher altitudes. Both are found in the Huachucas and the Chiricahuas. However, *pricei* is common in the Chiricahuas and rare in the Huachucas, while the opposite is the case for *lepidus*. If we were to see and photograph a twinspot, Barfoot was our best chance.

Barfoot Park rises to 8,826 feet and is covered with thick stands of majestic ponderosa pines. An indescribably huge talus slope of loose rocks covers one side of the peak. The rocks vary from fist-sized to bigger than a trash can. The talus slide slopes upward at a 45-degree angle or steeper. The air is thin at this altitude, so any climbing results in severe shortness of breath. The twinspots live in the talus slope, where they can bask and feed on the ubiquitous Yarrow's spiny lizard (*Sceloporus jarrovii*), or retreat deep between the rocks when threatened. The plan was to climb the talus slope, looking and listening for *pricei*. To summarize a long, strenuous morning, Alex found the only twinspot, a small specimen, which retreated into a shallow crevice and thus could be photographed. Interestingly, the snake had different segments of its tiny rattle painted, from the basal segment outward, green, purplish-black and white. Obviously the snake had been captured previously and marked as part of a scientific study. Not wanting to interfere with that study, we were careful to leave the snake exactly where it was found. Another snake was heard buzzing deep among the rocks, but too deep to be seen.

On the way out of the Barfoot Park area, we encountered a forest ranger. He politely asked the purpose of our visit, and on hearing it was to see and photograph snakes, he carefully recorded each of our license plate numbers. In spite of our offers he declined to inspect our hunting licenses or search our cars. He probably planned to compare our license numbers to a known list of "bad guys," to be able to document the visits of any convicted poachers. We were glad that such a well-known haunt of the protected twinspot is being watched closely.

During this segment of the trip, Ron kindly drove Mel back to Tucson to catch an early flight out. He was rewarded for this good deed by spotting a desert box turtle (*Terrapene ornata luteola*), on the way back to Portal. This was the second of four native Arizona turtles seen so far.

It was time to return to Tucson. On the way, all seven cars drove in a caravan to Rucker Canyon on the east side of the Chiricahuas. We had seen some exceptionally pretty *lepidus* here in 1991. In the first five minutes, Ralph found a three-foot blacktail crawling in the shade of a small tree. This was a pretty specimen, but paled in comparison to the vivid yellow and black one Gery found in the Huachucas. Photographs and video were taken, and as we left the snake climbed several feet up into the tree. Blacktails are known to exhibit climbing skills with some regularity. In spite of intensive effort searching the canyon, we saw nothing else of interest.

And so the trip wound down. We had one final night before returning to Chicago, and met Roger for dinner back in Tucson before trying our luck one last time. The consensus of the group was to go to the same canyon where Roger had guided Gery and Ben to such fabulous luck the first night. The rest of us hoped for a fraction of that success because duplicating it would be all but impossible. Still, a single Gila monster would be the highlight of the trip for those of us who hadn't yet seen one, and I was still searching for my first tiger rattlesnake.

Roger's productive canyon is within a state park, hence collecting and collecting equipment are forbidden. Following

Roger's Factor Number Three: Timing, we arrived half an hour before dark and watched Roger fidget impatiently as the large group got ready. Armed only with cameras, canteens, flashlights and hiking boots, we passed several hikers and joggers on the busy pedestrian-only road leading past the mouth of the canyon.

Suddenly Joan let out that welcome call, "Got one!" It was a three-foot *atrox*, next to the curb. I felt let down that it wasn't the hoped-for tiger, but excited that snakes were out and about. As Joan picked up a cactus skeleton and tried to nudge the *atrox* over the curb and back to the safety of the desert, two little, old, white-haired ladies out for a hike passed us. Most non-herpers I'm exposed to have a passionate hatred of snakes, especially when they see an obvious, large rattlesnake. I hardly expected what I heard next.

"Ohhh, leave that poor thing alone," cooed one of the ladies, as if the "thing" was a kitten and not a rattlesnake. They didn't know we were good guys trying to help the snake out of danger, but we enjoyed her enlightened attitude.

We entered the narrow path into the canyon as night fell. I found that it was necessary to pan the light back and forth to the side to look for critters and to the path to avoid stepping on cacti, loose rocks and rattlesnakes as big as the one we had just seen. What wasn't in the direct beam of a flashlight was only inky blackness. Flashlight beams could be seen cutting the darkness at various levels, as different people climbed the canyon sides, wandered off among the cacti, or followed the path. What wasn't right in front of you was black. My sense of anticipation was keen. I wasn't prepared for what I heard next.

"Turtle!"

High on a slope, Ben was yelling "Turtle." My only thought was that he had found another box turtle. Climbing to meet him, I looked down on something much larger than a box turtle. It was almost a foot long and chocolate brown, with a high, domed shell. My first thought was that turtles didn't belong on such steep slopes, and I suddenly realized I was looking at the first wild desert tortoise (*Gopherus agassizii*) I had ever seen. This was a new species for any of our trips, and Ron was excited to see his third of the four native Arizona turtles. Only the yellow mud turtle (*Kinosternon flavescens*) eluded us.

Seeing a desert tortoise was exciting, although not as exciting as the anticipated Gila monster or tiger rattlesnake. Ron might argue that point, and I will concede that a tortoise was a good find nonetheless. I was beginning to resign myself to the fact that Gery and Ben had hogged all the luck, and that we wouldn't see anything more exciting than a lousy turtle. Someone found another small *atrox* coiled on the desert floor, but we still hoped for better things. Still another call rang out. This was the one for which I had been waiting.

"Gila!" It was Roger who scored the first monster of the night, a robust adult.

I was one of the farthest away—it figures—and I stumbled through cactus and mesquite to the growing circle of flashlights. The poor Gila was surrounded, and ambled back and forth through the center of a thick bush trying its best to get away from us. The hungry herpers from the reptile-starved Midwest would not be denied. The thick brush, the cacti we were forced to dodge, and the fact that the lizard never stopped its ambling gait frustrated those of us trying to take pictures. Rich reminded us that unlike snakes, lizards have perfectly good ears and that we needed to be quieter. His warnings fell of deaf ears, appropriately enough, as in our excitement the group babbled like excited children in a toy store. Everyone got a good look, several of us took pictures and most finally moved on, but I lagged behind in growing frustration as I struggled to get a better photograph. Suddenly another cry pierced the night.

"Another Gila!" This time it was Joan who scored.

I barely had time to consider our incredible good luck. Two Gilas in one night! We were closing in on Gery and Ben's record. I ran to catch up and struggled again to take photos as the full-grown monster ambled about. This one paused as it exited a stand of prickly pear, and I impaled one leg as I leaned in for a shot. It was worth every puncture. I was barely finished when there was another shout.

"Gila!" It was Roger again.

It was our third monster of the night, and all in quick succession. This was truly a memorable experience, and we hadn't even seen my elusive tiger. This lizard was a subadult, and Roger estimated it to be a year old. The first two Gilas were heard walking through the undergrowth before they were seen. This Gila was spotted crossing the trail from roughly 100 feet away. Like the others, this one was restless and eager to get away from the flashlights and loud voices.

I was still taking pictures of the little Gila when I heard another shout. Dang! We were finding so many herps I couldn't keep up.

"Snake!" It was Greg's turn to be the hero.

Could it be my sought-after tiger? No, it was a western longnose snake (*Rhinocheilus lecontei lecontei*). This kingsnake relative uses its long nose to burrow after lizards or reptile eggs in the sand, and Greg found this one foraging with its head in a burrow. Most specimens have black saddles flecked with white on the sides. The spaces between the saddles are usually red flecked with black, with a whitish border next to the saddles. It bears a superficial resemblance to a speckled tricolor kingsnake. In some parts of its range a color phase with starkly contrasting bands occurs. The black bands are wider and fewer in number than in the typical form, and the spaces between the bands lack the typical red color and have less black spotting. Snakes with this pattern strongly resemble banded California kingsnakes. Once thought to be a distinct species, *Rhinocheilus clarus*, it is now merely referred to as the clarus phase of the western longnose snake. Greg's specimen was a clarus phase individual.

Longnose snakes are the only American colubrid snakes with a single, rather than divided, row of scales on the underside of the tail. Otherwise, single subcaudal scales are a fea-

ture of pit vipers in the United States. Longnose snakes sometimes exhibit the startling defensive behavior of passing a copious amount of blood from the cloaca when threatened, in addition to the more commonly observed tail vibration and discharge of musk. This may only occur in female snakes, and it is unknown whether the benefit is merely to startle a would-be predator or whether the blood contains some noxious property. This specimen did not pass blood, but we had seen that display in longnose snakes on previous trips.

Roger reported that this was only the second longnose snake he had ever seen in this particular canyon. The previous one had been found in July of 1989! He seemed to be more excited with Greg's find than any of the Gila monsters, and why not? This was only the second longnose seen here in 11 years, whereas the canyon had now provided six Gilas in less than a week.

Once again I straggled behind to take pictures, and I finally looked up to find that most of the group had disappeared over a ridge. I struggled to find a path through the cactus and catch up, and was out of breath when I did so. They had come upon a shallow, dead-end cave, like an aborted mine shaft. Several people entered the cave, but only the fifth person in spotted the desert tortoise on the cave floor. It looked like another rock and no one was expecting it.

The group was spread out as we entered the area where Gery and Roger saw the mountain lion. Roger had gone back the following day and found that the deer carcass had been dragged away. Our noses told us the lion hadn't quite finished the meal, and although we didn't find the carcass, after five days of temperatures near 100 degrees the odor was permeating. What I did see, however, was a little white face looking back at me from eye level in a bush. Investigating, I found a female collared lizard (*Crotaphytus collaris*) sleeping in the bush. This lizard is named for the dark, collar-like ring around its neck, thus "collar*ed*," although novice lizard keepers often mistakenly call their pets "collard lizards," like the salad greens. Nearby there was a shallow pool where water collected in a depression in the rock, in which six big Colorado River toads (*Bufo alvarius*) swam along with a number of tadpoles.

It was getting late and we were almost to the paved road that would be our route out. I was feeling a strange mix of excitement over the luck we had, and disappointment that we still hadn't seen a tiger rattlesnake. While I mulled over the inevitability of another tigerless Tucson trip, Joan and Roger were well ahead of me. Joan bemoaned the rough footwork in the canyon bottom to Roger, who suggested using a trail that conveniently crossed the wash right at that point. She hooked left, preferring the more level playing field that the trail afforded, while Roger continued to descend the steep sided arroyo.

Meanwhile, from my perspective in the back forty, I heard a muffled shout from up ahead, but I couldn't make out what was said. Then I heard someone closer say, "Snake." Finally, I heard the word I had been waiting for all night.

"Tiger." Joan had just started walking up the trail when she discovered the snake.

I let out a "Yehaw!" of my own. Finally!

I'd been looking for tigers in 1991, again in 1997 and again on Roger's prime Sanctuary Road earlier in the week. Now, during the last hour of the last night of our current trip, my persistence was finally rewarded. Tigers are 18 to 36 inches long, and this one was on the small side of that range. Moreover, this snake was very thin with a triangular rather than round cross section. It displayed a prominent backbone and loose folds of skin on its sides, and might have recently given birth. Usually stout-bodied, tigers have a disproportionately small head for their size and a disproportionately large rattle. This snake had a dull orange background, but they can be gray, bluish gray, pink, lavender or buff, with dark gray or brown crossbands or "tiger" marks. The venom of tiger rattlesnakes is quite toxic, almost matching that of the mojave rattler, but the small head and short fangs result in a low venom yield per bite. Nevertheless this is a potentially dangerous snake and one to be treated with caution and respect. This particular snake was inoffensive, as is typical for the species. It barely rattled and simply tried to crawl slowly away as we took pictures.

How fitting that the last herp of the trip should be my sought-after tiger rattlesnake. Once again our CHS group had incredible luck. Unbelievably, Gery and Ben's impressive first night at Roger's canyon was duplicated after all; on the last night we also found three Gilas, two *atrox* and a tiger. It would have been too much to expect to see a mountain lion as well, especially with a dozen noisy hikers. Instead, we substituted two desert tortoises, which were welcome finds by themselves.

To summarize, our group saw 46 species of herps, compared to 32 species in 1997 and 29 in 1991, making this our best Arizona trip yet. In addition to the discovery of big, showy rattlesnakes and Gila monsters, many of the little things added substantially to the overall experience. The Sonoran whipsnake sleeping in the catclaw bush is one example. Finding several prairie rattlesnakes during our stay at Portal is another. The neonate short horned lizards were a good record that can be used by those who study them. We can't begin to understand the population dynamics of reptiles until we collect records of their reproductive patterns, and every recorded birthing incident yields rare insights into little understood behavior. The first tortoise we found was only the third tortoise ever seen by Roger out of shelter after dark—out of over 500 wild tortoises observed! Finding a collared lizard after dark is highly unusual, as was scoring a longnose snake in the rocky foothills of a desert mountain range.

It was a few days after my boys and I had returned home. I was still processing my photos and Keith hadn't even begun to edit his video. Once again, I had mail.

This is what came across my computer screen. It was from Roger.

<< Just to show how hit and miss herping in Arizona can be, we went to the Sanctuary Road last night [the spot where my boys and I struck out on our first night]. You don't want to

hear how we did, so I'm going to tell you:

Nine snakes on the Sanctuary Road, 16 snakes total.

SR: tiger, 2 lyre snakes, 2 *atrox*, 1 *molossus* [blacktail rattlesnake], 1 night snake, 1 black-headed snake [*Tantilla* sp.], and YES, a pyro!

Five scuts, a gopher snake, and a longnose on the road on the way back to town. (And we weren't even trying!)>>

Kauffeld (1969) described what he called the ironies of snake hunting. He desperately wanted to find a tiger rattlesnake near Tucson, but couldn't seem to do so. During his visit those around him found tigers with ease, but Kauffeld personally was unsuccessful. The ironies mounted—people found them where Kauffeld had just been, they found them when they weren't looking for them and they found them when conditions suggested snakes shouldn't be out moving. Kauffeld only found road kills. It was three years later before he finally found his first tiger. I know how he felt. It was definitely worth the wait.

To mirror Kauffeld's so-called ironies of snake hunting, Roger listed five ingredients that explain varying success on a herping trip: location, weather, timing, personnel and luck. You can't control the weather, but if you take care of location, timing and personnel, our experience is that Lady Luck will shine on you brightly.

Once again, our group enjoyed phenomenal success. Once again, we hit the herp jackpot.

Suggested Reading

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Book Reviews: Seven from the SSAR

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The Society for the Study of Amphibians and Reptiles (SSAR) is a unique biological society for it offers a broad and diversified program encompassing seven different publication venues. Three of these, the Facsimile series, Contributions to Herpetology and the *Catalogue of American Reptiles and Amphibians*, provide an outlet for herpetological material that needs to be published and all are important additions to the herpetocultural library. The first reprints older out-of-print books and papers. Introductory information concerning the importance of the reprint, biographical sketches of the author(s), and comparisons of the original scientific nomenclature with currently accepted names are often included. The second covers book-length original herpetological studies or noteworthy symposium proceedings. The last is an account of all information known on over 600 amphibian and reptile species in America. Seven books have been published recently which deserve the reader's attention and are reviewed below.

To understand the importance of previous workers in herpetology and gain a sense of the history of herpetological investigation, the herpetoculturist should begin by reading biographical accounts of deceased herpetologists. In this way, one gains a sense of the major contributions by these investigators which puts herpetoculture in perspective. So many species, now in captivity and often captive-bred, are named after these persons. Representative taxa such as the eyelash viper, Dumeril's ground boa, Wagler's viper, Baird's ratsnake, Siebenrock's side-neck turtle, Louisiana pine snake, bullsnake, speckled kingsnake, eastern fox snake, Barbour's map turtle, dusty hognose snake, Merriam's canyon lizard, several milksnakes (*Lampropeltis triangulum taylori*, *L. t. blanchardi*, *L. t. stuarti*, *L. t. gaigeae*), boa constrictor (*Boa constrictor amarali*), Fiji Island boa, Kenyan sand boa and Barbour's anaconda serve as examples. One species, the midland brown snake (*Storeria dekayi wrightorum*), was named after three herpetologists. So my recommendation is to begin reading Kraig Adler's "Herpetologists of the Past" which was published in 1989 by SSAR.

The next step is to join SSAR. Members are entitled to pre-publication discounts for all society publications which easily pays for the cost of an annual membership if a few books are purchased. The Society publishes *Journal of Herpetology* and *Herpetological Review*, which are included as part of the membership package.

The final step is to begin purchasing SSAR Facsimile reprints which are photolithographic reprints of out-of-print but important classics. It is invigorating and stimulating to page through these wonderful publications and enjoy the illustrations for their aesthetic value. In addition, 13 titles in the Contributions to Herpetology series are available.

***The Gila Monster and its Allies* by C. M. Bogert and R. Martin del Campo (1956, 262 pages, hardbound, $38)**

Before the reprint of this important out-of-print book, copies of the original were in great demand but rarely available. This monograph is the definitive work on Gila monsters and beaded lizards. The late Charles M. Bogert wrote a preface for the reprinted edition describing the origins for this work, with additional information on fossil history and distribution of living *Heloderma*: origin, evolution and dispersal of venomous lizards; evolution of dentition and the venom apparatus; role of venoms in food acquisition and defense; and evolution of venomous squamates: possible scenarios. In a new section, Daniel D. Beck provides a retrospective of the importance of this monograph which stands the test of time well.

The study contains much of value: original descriptions and type localities; discussion of characters; classification and distribution; clines; food and feeding habits; bodily functions, behavior and activities; life history; ecology; venom apparatus and the venom and its effects; bites inflicted on human beings; man and the helodermatids; and a bibliography. Pay attention to the section entitled "Hybrid Origins" (pages 206-209) which is a spoof directed at an evolutionary biologist at the American Museum where Bogert was employed. It is a bizarre and amusing description of the supposed discovery of a new genus and species of a *Heloderma*-like critter.

Many years ago, I was the unsuspecting recipient of Bogert's oblique sense of humor. Several colleagues and I were staying at the American Museum's Research Station in Portal, Arizona. Bogert returned from a successful collecting trip to Oaxaca, Mexico, with bags and jars filled with herpetological rarities. He proceeded to show them to us with great pride. When he reached into the last cloth bag, he asked me to identify the creature which he placed in my outstretched hands. As he did so, he stressed that if I were unable to provide the proper identification, it would prove that I was an incompetent herpetologist unworthy of the appellation. With dread, I viewed the small, shiny black snake but to my shame, I was unable to provide the correct answer. To add to my embarrassment, the snake discharged the most foul-smelling, nauseating musk that I have ever encountered from any snake. Repeated hand washings failed to remove the pungent odor for many days. Whenever Bogert saw any of my colleagues or me, he reminded us of my ineptitude. As we were ready to leave, Bogert finally told me that I had held the first Oaxacan dwarf boa (*Exiliboa placata*) known to science which was due to be described later by him. The whole episode amused him greatly and he gleefully reminded me of my confusion whenever we met!

***Herpetology of China* by Er-mi Zhao and Kraig Adler (1992, 522 pages with 371 photographs, hardbound, $60)**

Before this book was published, there was little available on Chinese herpetofauna in English. Clifford Pope's classic *Reptiles of China*, published in 1935, has been out-of-print for years and when it is available on rare occasions, commands an exceedingly high price. This present volume will stand as one of the best publications on Chinese amphibians and reptiles.

One of the most important and interesting parts of this book is the extensive review of the history of herpetological studies in China. It covers the studies of Chinese scholars of antiquity, the era of foreign explorations, a comparison of old and new herpetological studies, cooperative research programs with foreign scientists, endangered and economically important species, and herpetological journals, societies and meetings. The next section provides illustrated keys to Chinese reptiles and amphibians, followed by numerous color photographs of specimens and habitats. These features alone are worth the price of the book. An annotated checklist of genera, species and subspecies; distribution; annotated bibliography; appendices (Chinese geographical names, collecting and preservation techniques, and a list of herpetological journals); indices (authors and other persons, scientific names) and maps round out the book.

The scholarship and quality of this volume are very impressive, and should convince every herpetoculturist to purchase a copy. There is no other place to go to get a feel about Chinese herpetology and the variety of interesting creatures found there.

***Captive Management and Conservation of Amphibians and Reptiles* edited by James B. Murphy, Kraig Adler and Joseph T. Collins (1994, 408 pages, hardbound, $58)**

This book brings together 70 of the major names in captive management and conservation of amphibians and reptiles. In 1991, a SSAR symposium was convened at Pennsylvania State University to honor Roger Conant for his many contributions to herpetology and this volume incorporates many of the papers presented there. For completeness, several additional authors were solicited to write papers on crocodilian conservation, tuatara reproduction and construction of artificial refugia for snakes.

Topics include the state of conservation and conservation organizations; programs in zoos, academic institutions and public aquaria; artificial means of inducing reproduction; genetic management; and role of the private sector. Important elements for managing captive populations are covered such as lighting, temperature, nutrition, social and reproductive behavior, chemoreception as it applies to feeding, and veterinary procedures.

Model programs which have contributed to long-term captive reptile colonies include papers on Galápagos tortoises and iguanas, piebald chuckwallas, prehensile-tailed skinks, boid snakes, day geckos, tuataras, panther chameleons, Aruba Island rattlesnakes, and chelonians. Amphibians covered include hylid and dendrobatid frogs, a variety of salamander species, caecilians, and various toad and *Mantella* taxa.

***Contributions to West Indian Herpetology* edited by Robert Powell and Robert W. Henderson (1996, 457 pages, hardbound, $60)**

Nearly 60 authors have contributed to this book which follows an SSAR symposium held in 1994, describing the latest research findings in the West Indies (W.I.). The list of contributors is a who's-who of biologists specializing in the herpetology of this region. This volume is dedicated to the late Albert Schwartz who published 195 titles covering the herpetofauna there. Chapters on the history of W.I. herpetology, an annotated checklist, and color plates of at least one representative species of each genus gives the reader a hint of the diversity of herps found there. The next set of papers covers evolution, systematics and biogeography. For the herpetoculturist, the assemblage of papers on ecology and behavior will be of particular interest. There is an extensive section on conservation discussing declining amphibian populations, status of sea turtles, Jamaican iguanas, Mona Island boas, the arboreal boid *Corallus hortulanus* and the American crocodile. Abstracts of the papers presented at the symposium and an index complete the volume. One of the editors, Robert Henderson, is well known as a prominent student of W.I. herpetology. In 1991, Albert Schwartz and he published a definitive treatment in a book entitled *Amphibians and Reptiles of the West Indies*. Descriptions, Distributions and Natural History (published by University Press of Florida, 15 NW 15th Street, Gainesville FL 32611-2079, toll-free telephone 1-800-226-3822, fax 904-392-7302, 720 pages, $75). This book covers almost 600 species and each account includes a synopsis, description, type-material, source of published information, and a distribution map. If the herpetoculturist were limited to just two titles on W.I. herpetology, these two contributions would be the ones to purchase. With these two volumes on hand, a beginning or advanced student of W.I. herpetology could be confident that the most recent information is available on the bookshelf.

***Herpetology of Japan and Adjacent Territory* by Leonhard Stejneger (1907, 684 pages, hardbound, $58)**

This classic work remains the defining work covering Japanese amphibians and reptiles but also includes descriptions of forms found in Taiwan, Korea, Manchuria, adjacent coastal China and easternmost Siberia. Now out-of-print, the book fetches a high price from used book dealers; a recent price list sent to me offered a copy for over $200 so this SSAR reprint is a real bargain. There are 35 plates, over 400 text figures, keys, annotated bibliography, gazetteer of localities and an index. The introduction by Masafumi Matsui provides a biographical portrait of Stejneger and a description of the genesis of the publication. Of particular value is a list of Stejneger's scientific names and current nomenclature which assist the contemporary reader.

***Gecko Fauna of the USSR and Contiguous Regions* by Nikolai N. Szczerbak and Michael L. Golubev (1996, 245 pages, hardbound, $48)**.

Herpetoculturists are really turned on by geckos and many species are regularly bred in captivity. Gecko fanciers are in luck for this new book covering the Palearctic gecko fauna now has been updated and translated from Russian into English by the second author and Sasha A. Malinsky from the 1986 Russian edition. Seventy-five taxa including subspecies are covered. The monograph's scope is broad and covers geckos found in the former Soviet Union with related species in Mongolia, western China, Afghanistan and Pakistan, through the entire Middle East to eastern Europe and northern Africa.

Golubev's introduction to this new English edition details the trials and tribulations which he and Szczerbak encountered as they prepared the original work for publication. It was not easy to do science in the former Soviet Union and his description of the many impediments thrust upon them by governmental bureaucrats makes for fascinating reading. One statement really stands out as significant: Golubev states that this monograph is symbolic as all future workers will now be adding the adjective "former" to U.S.S.R. in their titles.

Each species account deals with systematics, general biology, type locality, karyotype, synonymy, diagnosis, description of holotype, color and pattern, reproduction and growth rate, variation, ecology and behavior, and conservation. There are two genera covered which should be of particular interest to herpetoculturists: fat-tailed gecko (*Eublepharis*) and skink gecko (*Teratoscincus*). Gecko aficionados will love the color photo on the dust jacket: the Persian spider gecko (*Agamura persica*). There are 24 color photographs and many black-and-white shots of geckos and their habitats. The book also includes keys, an extensive bibliography and index.

Not all of the taxonomic arrangements in this book are accepted by other workers. It is beyond the scope of this review to address these issues but see Bauer (1987) for additional information on the original Russian monograph.

Catalogue of American Reptiles and Amphibians

The American Society of Ichthyologists and Herpetologists received a National Science Foundation grant from 1962 to 1970 to support the publication of this ongoing series. In 1973, SSAR took over management of the *Catalogue*. The series comprises a group of individual taxon accounts, now numbering over 600, each of which is prepared by a specialist and reviewed by colleagues familiar with the species. There are individual section editors for caecilians, salamanders, anurans, chelonians, lizards and amphisbaenians, snakes and crocodilians. A typical account is comprehensive in scope: photograph of the taxon, synonymy, content (with subspecies if applicable), definition, diagnosis, description, illustrations in other publications, distribution with map, fossil record, pertinent literature, remarks and comments (sources of additional information, various common names, reproduction, behavior and so on), and an extensive bibliography. The accounts are the most complete single references available to the herpetoculturist. Since these are individual loose-leaf accounts, indices, imprinted post binders and systematic tabs to divide the sections taxonomically can be purchased separately.

SSAR publications may be obtained from:

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A complete list of publications is available from Dr. Aldridge.

Literature Cited

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Herps in Hollywood: *Crocodile*

by John Kostka

Not to be confused with the 1979 Korean film, this *Crocodile* is new and purely American. Of course, that doesn't necessarily mean that it is above the (rather low) standards of that film.

Crocodile seems for all the world like a poorly made *Friday the 13th*, the only difference being that Jason was in this case replaced with a large animatronic (or, in a few shots, computer generated) crocodile.

The plot itself, which is about as ancient as the film's one-hundred-year-old reptilian menace, is not worthy of more than a one or two paragraph summary, so I'll get that out of the way and move on to better things.

Our film begins with the usual bunch of obnoxious teenagers, played by overaged actors, setting out for a weekend of fun on the lake. After about fifteen minutes of "sexy," beer guzzling antics, the group comes upon a nest of giant eggs. Immediately they do what any group of sensible young members of society would do, and begin to heave them at each other.

As a prank, one of the eggs is placed in the backpack of the film's female lead, allowing the crocodile reason to assault the group for the rest of the movie. After another few minutes worth of hi-jinks, the group gather around a campfire, where the legend of the crocodile is delivered to them by one of their comrades, a local. Some ludicrous story about a hotel manager (the shots of the run-down hotel are obvious matte paintings) raising giant Egyptian crocodiles owned by the pharaohs in order to gain the power of the Egyptian crocodile god.

Soon after, various members of the group begin to disappear and the rest are left stranded, fighting for survival against a crocodile that is not only speedy on land, but a distance runner as well.

As I said earlier, this is nothing new. A bunch of irritating adolescents being chased through the dark (though rather sparse at times) woods by a malevolent menace.

According to the director, Tobe Hooper, of *Texas Chainsaw Massacre* fame, he was trying to do something along the lines of that film again, something that was, as he called it, "a high tension, high energy film." The film is so ineptly made, however, that any terror that might once have been in it is abolished.

The film is not helped by the young cast, all of whom seem to have passable acting ability (at least in the majority of the scenes), though no charisma at all. Most of the group is more obnoxious that the normal kids in teenage death films. This wears very thin after the first few minutes, and with some 25 or 30 to go before the blessed beast begins to remove the annoying cast from the screen, you may find yourself reaching for the stop button a great number of times.

Of course, the film is enlivened by some of the colorful locals, including the county sheriff and his deputy, and the owner of a local crocodilian farm. Their redneck ways are great for a number of huge laughs, as they wander around ranting about the crocodile's "death gaze" and whatnot.

Aside from this, though, the film is pretty much a composite of either teenagers walking around through the woods arguing, or teenagers being ripped apart by a giant crocodile.

The crocodile is really a sad piece of work as well. The thing looks to be as still as a board, and it slides through the water without moving a muscle. The shots of the beast running on land are very unrealistic as well. First, its feet don't seem to touch the ground, and secondly, it moves with the speed of Michael Johnson in front of a cheering crowd of Olympic spectators.

The crew even seems as though it botched what would normally be considered the "easy" special effects. There is a scene featuring a shot of an obviously synthetic severed head (which a member of the local law enforcement casually picks up bare-handed and waves around). Another shot features the owner of a backwoods alligator farm reaching into a pen and pulling out an egg from the nest of one of his alligators. The funny thing is though, that as he grabs the egg it opens its mouth, and when he pulls it out of the cage it closes its mouth again, but then the head begins to squish down, as it deflates!

I could ramble for hours and pages as to all of the inaccuracies and flaws of the film, but I don't want to take all the surprise from it should anyone manage to get themselves to watch it. While all of these do sound amusing, you must keep in mind that it is mixed with painfully irritating doses of teenage shenanigans and melodrama that would make all but the most die-hard reptile movie fan weep.

The young 'uns give the film a feeling of culture shock, as modern styles collide with outdated 70s monikers like Duncan and Brady. Mr. Hooper seems as though he is trying to bring the story ever so subtly into a turf that is more his own. Frankly, I think I would have found the picture more entertaining had the characters all been wearing bell-bottoms. At least that would give the film a sense of fun. Without such things the film just flounders and proves once again that they just don't make 'em like they used to.

Crocodile premiered on the USA Cable Network. I'm sure that it will eventually come out on video (without commercials and censoring), though I don't really know if it's worth a rental. If you have cable, keep an eye out and they'll probably show it again later. But if you feel that you absolutely *must* watch a giant crocodile movie tonight, you'd probably best be advised to run that copy of *Lake Placid* through your VCR again.

USA Films, 2000, about 90 min.

MPAA rating: R for: Graphic violence, adult language

COMING SOON

As if the above film wasn't enough, Crocodile II: Death Roll *is already in production, slated to be filmed in India. The*

release date of Blood Surfer *(about saltwater crocodiles down under) is unsure at this time, but for what I hear the film has been shot. Sam Neill will star in* Jurassic Park III, *which you may have seen mentioned in the ads for the previous* Jurassic Park *films. There is word that the Japanese films* Gamera 2 & 3 *may be released in this year or the next, though nothing has been said recently.* Reptilicus 2 *(the first concerned a reptile monster generated from a dinosaur limb—who knows what this will have in store!) is reportedly being planned, almost 40 years after the release of the original, though details are sketchy. There's no new news on the film* Python, *so it's anyone's guess as to what its status is, though I've heard nothing of it falling through yet. Speaking of pythons,* Komodo *and* Anaconda *scriptwriter Hans Bauer is planning another script entitled* Snake, *concerning a giant python from a carnival sideshow(!) terrorizing a family trapped in their rural Iowa farmhouse. He's thinking of trying one more giant reptile script after that (I'm of the opinion that no matter how many times he tries he's not going to get it right), but so far (luckily) nothing has been written.*

Bull. Chicago Herp. Soc. 35(11):267-269, 2000

HerPET-POURRI

by Ellin Beltz

SSSSssssshhhhh, I'm ssssleeping.

Dropping water levels in Lake Michigan proved a bonanza for some Beaver Island, Michigan, plumbers who kept lowering residents well depths as the ground water retreated apace with the lake. However one house proved a difficult case. The lady insisted she hadn't turned off the pump switch; she couldn't even lift the well cover. Then as "the plumber continued to move the flashlight beam around . . . [he] found the culprit—a big fat snake was coiled inside the well, enjoying the tranquillity of a cool haven—where the water was still and the pump blessedly silent." The snake had flipped the switch on the pump, hence no water. [*Washington Post*, September 6, 2000, from Andy Via]

Lead time

By the time you read this, you'll know who will be President of the U.S. for the next four years. When this column was put to bed was before the election. Please don't hesitate to send stuff, even if it sometimes takes time to appear. :)

One man's meat is another one's poison

Marty Marcus sent a photo from the *Tacoma News Tribune* [October 11, 2000]. Someone was digging around in the Tacoma Public Library collection and found a photo of a "frog farmer . . . hold[ing] 2 large bullfrogs . . . July 30, 1937 . . . the former taxi driver left his cab behind a year earlier to raise frogs, and at the time of the photo had 50,000 of them. His plan was to start selling the frogs in 1939 for those who appreciated the delicacy of fried frog legs." Marty writes: "I wonder how many of these escape to become the problem they now present to much of the other wildlife here in Washington?"

Mus illegalis?

Alan Rigerman writes: "I can't believe this issue is not being discussed in all Herp Publications. Within 2 years, the U.S. Department of Agriculture [USDA] will extend its authority over rodents. I don't think people realize that they will decide size of container, number in container, virtually everything. I believe prices will skyrocket and many breeders, especially hobby breeders that sell their surplus will have to do so in a clandestine manner." The article is from the *Baltimore Sun*: "The Agriculture Department has agreed to begin drafting new regulations that would place laboratory mice, rats and birds under the protection of the federal Animal Welfare Act for the first time. Animal-rights groups immediately declared victory in their efforts to win tighter regulation of experiments on millions of the lab animals. . . . Several . . . research organizations [oppose] new regulations that they fear would make some biomedical research prohibitively costly. . . . Congress, meanwhile, is moving separately to block spending this year for any effort by USDA to draft new federal regulations of lab animals. . . . [A suit was recently] dismissed . . . that sought to force USDA to end the current exemption of lab rats, mice and birds from USDA regulation. The court's action came after [USDA] reached an out-of-court settlement, agreeing to begin rule-make procedures to end the exemption."

Chinese arrest salamander suspects

"Police in Central China's Henan Province have arrested three people suspected of being involved in trafficking more than 90 giant salamanders and over 30 civets. . . . Acting on a tip-off, local police detained {name removed} . . . where [he] was planning to transport the animals for sale in Guangdong. All the animals will be sent back to their native surroundings. [*China Daily*, August 14, 2000, from Kim and Wes von Papineäu]

Dinosaurs galore!

Log onto "http://www.projectexploration.org" to read the latest about the dinosaur expedition to Niger which will end in early December 2000.

Are the '90s over yet?

According to the Indian "Coalition for Inclusion of Reptilian Gymnastics in Olympic Competition," snake-charming should be an event at the 2004 Olympics. [*Chicago Sun-Times*, October 2, 2000, from Lori King]

Salmonellosis, again

• "A 27-day-old baby boy was seen with an 8-hour history of irritability and poor feeding," reports the *Journal of the Royal Society of Medicine* [2000:93:318-319 sent by Frederic L. Frye]. He had a very poor condition by the time he saw the

doctor and the next day the culture of his cerebrospinal fluid grew a *Salmonella* species. The family owned a green iguana, healthy, but found the be excreting *Salmonella poona*, the same type as the culture. The baby recovered, but the doctors wrote up this rare case of bacterial meningitis caused by salmonella. However, 71 percent of the patients have permanent neurological damage even after being treated for at least three weeks with intravenous cephalosporin.

• Go on line to read the latest salmonella facts from the Virginia Department of Health <http://www.vdh.state.va.us/misc/epi/salmon.htm> or the Center for Disease Control's report on reptile-related salmonellosis <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/mm4844a1.htm>. Your tax dollars at work in that alphabet soup. As with any pet, wash your hands after dealing with reptiles, amphibians, feeder mice and so forth. Thanks to Andy Via for the websites and an article from the Richmond *Times Dispatch*, March 23, 2000.

A whole new meaning for "toad in the hole"

"Stunned [an English mum-of-one] was left hopping mad—after finding a live toad in a tin of dog food. It flopped out as she spooned the Winalot chunks into her three dogs' bowls. The two-inch beast should have croaked after spending three months vacuum-packed in a tin which was shipped in from France and is supposed to have been heated to 110°C. Incredibly the amphibian survived. . . . [The woman] said, `When I opened the can I just screamed—I couldn't believe it.' . . . Now the [family is] keeping it as a pet in its own vivarium—after naming it Buddy after the telly toads in the Budweiser advert. A Winalot spokesman said, `We were amazed and are now investigating this unique complaint.'" [*The Sun*, London, U.K., September 16, 2000, from Kim and Wes von Papineäu]

Ruffles have what?

Meanwhile in Tokyo, Calbee Foods Company started work again after a shutdown for possible plant contamination. A woman in Chofu, Japan, had discovered a 15-centimeter lizard when she opened the bag of potato chips. The company has recalled 62,000 bags of the same type of product even though it says it cannot understand how the lizard entered the factory and then got into a chip bag before it was sealed. [*Kyodo News Service*, August 16, 2000, from Kim and Wes von Papineäu]

Busting turtlenappers

Michigan Out-of-Doors Magazine, conservation section reports "After several . . . complaints of subjects selling live turtles in Berrian County, [officers] found seven huge alligator snapping turtles (from Louisiana), 60 common snapping turtles, 28 painted turtles, seven musk turtles, three map turtles, one spotted turtle, one turtle from Australia, six bags of turtle livers, 26 two-pound bags of turtle meat, and 21 three-pound bags of turtle meat. The commercial trappers turtlefest included 50 Michigan snapping turtles. The subject possessed 24 undersized snappers and a protected spotted turtle and was over the limit for personal take of turtles other than snappers. In addition, the trapper sold non-commercial species." Unfortunately, the suspect or suspects names were not given. [October 2000, no name on clipping] Hoping to hear the rest of this story. Don't forget to send it if you find it!

Y2K was the warmup

• The Asian long-horned beetle was found again this year in Chicago. In New York, two residents of Staten Island were diagnosed with West Nile virus. Last year, aerial spraying to prevent West Nile by the authorities was blamed for the decline of lobsters in Long Island Sound. Viruses, bacteria and small creatures move nearly at will by ocean going freighters. Cruise ships dump their bilges and their passengers' parasites and diseases in areas formerly pristine. There's a huge dead zone in the Gulf of Mexico and the Arctic is melting. Drought in Kenya, summer avalanches on Mont Blanc, floods in Ethiopia and volcanos in Japan. Is it really more catastrophe in the news or more news in the world? [*Tacoma News Tribune*, August 21, 2000 from Marty Marcus—it wasn't a "slow news day"]

• "A species of freshwater crab never before found naturally in the U.S. has turned up in Lake Las Vegas. The Japanese male crab was identified . . . by [a] biology professor. . . . Scientists suspect the crabs were dumped into the lake from an aquarium [because] `there is no natural way for them to get there,'" according to one researcher. [Eureka, California, *Times-Standard*, August 27, 2000, from Bradford Norman]

• Meanwhile, the Associated Press reports that 11,046 species (perhaps more) are at risk of immediate extinction. They include one in every four species of mammals and one in every eight birds. The U.S. fell out of the top 20 list, replaced by Cameroon and Russia. The top nations are Indonesia, India, Brazil and China. [*Chicago Tribune*, September 29, 2000, from Ray Boldt]

Just to keep it in perspective

"The death toll last year from infectious diseases like AIDS, tuberculosis and malaria is 160 times greater than the number of people killed in last year's earthquakes in Turkey, cyclones in India and floods in Venezuela, said the International Federation of Red Cross and Red Crescent Societies, which assists countries suffering natural disasters." [*New York Times,* June 29, 2000, from P. L. Beltz]

Vision testing not required in Arkansas?

"Two motorists were injured when their vehicles hit an eleven-foot, five-inch alligator on Arkansas 27." An Arkansas State Trooper said, "It was really that big. I measured it." The first driver to hit the reptile did so in a pickup truck which "became airborne and then rolled down an embankment before landing upside down in the woods." The driver escaped with minor injuries. The second motorist to hit the self same alligator which later died of injuries from the two accidents. [Little Rock, Arkansas, *Democrat Gazette*, September 9, 2000, from Bill Burnett]

Ready, set, switch!

For some unknown reason, green turtles prefer to nest in even years. Researchers have collected data on the number of nests

and hatchlings for more than a decade, and others around the world report the same thing. Why the turtles prefer to lay in even years has been ascribed to El Niño (what hasn't?), or a response to food supplies. A researcher slyly suggested that "the turtles will get together in a meeting and decide to switch the year so the reporters will ask a scientist why." [*Orlando Sentinel*, August 19, 2000, from Alan Rigerman and Bill Burnett's mom] The actual data reads:

1992 -- 553
1993 -- 154
1994 -- 936
1995 -- 184
1996 -- 864
1997 -- 227
1998 -- 1278
1999 -- 194

[from the *Daily Commercial*, Leesburg, Florida, August 19, 2000, from Bill Burnett]

Rationing antivenin

The only pharmaceutical plant in the U.S. that produces rattlesnake antivenin had to ration its inventory this summer. This left hospitals in snake-prone areas wondering how they were going to handle their next bite. Officials in Arizona urged people going outside to avoid snakes and be very careful where they step. Arizona hospitals treat hundreds of rattlesnake bites a year; a figure which is mind boggling to those of us who may only have seen these marvelous creatures in a zoo or a book. Wyeth-Ayers halted antivenin production until early in 2001 for no announced reason, but the Food and Drug Administration said that the plant was closed for renovations after "quality control" problems. [*Albuquerque Journal*, August 31, 2000, from J. N. Stuart]

So much for the "pure mountain spring water"

A spill of beer caused when "an employee of Coors Brewing Company [Golden, Colorado] flipped the wrong switch and sent 77,500 gallons of beer into a creek, killing thousands of fish and prompting health warnings. . . . The beer . . . washed through a wastewater treatment plant. . . . The fish likely suffocated from the alcohol—among other things—produced in the [fermentation] tanks. [Eureka, California, *Times-Standard*, August 27, 2000, from Bradford Norman]

Holy hot sauce, turtle man!

Sea turtle nest volunteers in Florida are carefully applying "Da' Bomb Ground Zero" habañero pepper hot sauce to fake sea turtle nests. They're trying to teach raccoons and foxes to stay away from real sea turtle nests. And it seems to be working. Another tactic is building "egg bombs," chicken eggs filled with hot sauce and planted on the beach for turtle predators. "The number of predators has dropped significantly after they have been sauced," said the coordinator of the staff at the appropriately named "Gumbo Limbo Nature Center." [*Sun-Sentinel*, August 18, 2000, from Alan Rigerman]

Well, it wasn't a gun

A 14-year-old Florida schoolboy took a coral snake to school in a book. He fell asleep on the school bus and was bitten by the snake while it escaped. He didn't say a thing until his hand and arm started swelling up several hours later. Students had reported a snake on the bus which the driver found. She ordered the students to keep their feet up and made an unexpected stop into a middle school parking lot where the students exited across the seats. A custodian killed the snake. Workers were getting ready to take the bus apart when the boy finally admitted he had brought it on board. The boy was treated with nine vials of antivenin and released. [*Florida News*, September 2, 2000, from Alan Rigerman]

Bite news from Florida

While receiving several stories about the man bitten by an Asian cobra who was treated with 50 vials of antivenin and finally recovered [thanks Alan and Bill!], three other people were envenomated by snakes in Florida in August. One was spit in the eye by a spitting cobra; he was transported to a hospital immediately, treated and released. Another was bitten by a western diamondback rattlesnake while placing it back in its cage in a pet shop, and a 47-year-old man was found dead apparently killed by a canebrake rattlesnake. [Fort Lauderdale *Sun-Sentinel*, August 4, 2000, from Kim and Wes von Papineäu]

Range extensions foiled

The fourth live snake to be discovered in New Zealand this year was captured in a container of used batteries which had been shipped from Australia. The venomous snake was dispatched. Other live snakes have been discovered in port areas, and a dead snake was found in a garden center. The director of the Royal Forest and Bird Protection Society of New Zealand said, "Containers are a biosecurity nightmare. They provide a safe, secure environment for the distribution of alien species around the planet." They are extremely concerned lest snakes get loose on snake free New Zealand islands and threaten native wildlife, like the flightless kiwi bird. [*The Evening Post*, Wellington, New Zealand, September 6, 2000, from Kim and Wes von Papineäu]

Welcome *Vivarium* contributors!

Catherine Johnson writes: "We were saddened by "*Vivarium Magazine's*" closing. I just wonder if this is an indication of what is happening within the hobby and if there will be a place for scientific study by the home hobbyist. Enclosed are some articles . . . we will also be joining CHS." Thanks for contributing to your "new home" and thanks also to Bradford Norman, Andy Via, Sean McKeown, Alan Rigerman and Kim and Wes von Papineäu for hopping, slithering, crawling or swimming on board, too!

Thanks to everyone who contributed this month and to:

Carl Gans, Frederick L. Frye, George M. Patton and Martha Ann Messinger, Ray Boldt, Bradford Norman, Lori King, J. N. Stuart, Ernie Liner, Carla and Miguel Ochoa, and Bill Burnett, for items they sent that I couldn't figure out how to use. You can contribute, too! Send whole pages of news or magazines with your name on each piece to me: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507. Letters and text only (no graphics, bugs or viruses!) to my E-mail <ebeltz@ripco.com>.

Bull. Chicago Herp. Soc. 35(11):270-273, 2000

Herpetology 2000

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

EASTERN DIAMONDBACK DISTRIBUTION AND HABITAT

W. H. Martin and D. B. Means [1999–2000, Herpetological Natural History 7(1):9-34] discuss the historical and present geographic distribution of the eastern diamondback rattlesnake (*Crotalus adamanteus*). Locality records suggest its presettlement habitat distribution was primarily open-canopy, pyroclimax pinelands and savannas, including longleaf pine/wiregrass sandhills, clayhills, and flatwoods, from southeastern Mississippi and adjacent Louisiana east to and including Florida and north to southeastern North Carolina. The species was also common in coastal strand and palmetto prairie and utilized temperate hardwood forest, tropical hardwood hammocks, and sand pine or oak scrub, especially where these were adjacent to pine-dominated habitats. Present-day habitat distribution includes remnants of the above plus various ruderal situations such as berms along canals, citrus groves, and old-field successional habitats. The availability of subterranean shelters from fire and cold, such as are provided by the burrows of the gopher tortoise and armadillo, rotting and burned-out bases of trees, rotting logs, and mounds resulting from fallen trees, may be important to local abundance. Large body size and a long gestation period may be two factors limiting the species' range to an area of mild winters and long growing season. The range has contracted and become fragmented in many areas because of agriculture, silviculture, urbanization, and plant succession resulting from fire suppression. Habitat destruction and fragmentation continue to be the greatest threats to the species. The authors believe the eastern diamondback rattlesnake is endangered in a significant portion of its range and urge protection of this rattlesnake and of its habitats.

FORAGING BEHAVIOR IN A SOUTH AFRICAN LIZARD

J. M. Greeff and M. J. Whiting [2000, Herpetologica 56(3): 402-407] note that lizards are not widely regarded as able to alter their foraging mode substantially in relation to the specific food source utilized. Rather, their foraging mode determines the food type that they utilize. The authors studied *Platysaurus broadleyi*, a lizard that utilizes food resources differing in several fundamental characteristics. They found that these lizards maintain this broad feeding niche by altering their foraging behavior. Adult lizards ambushed mobile insects but searched actively when feeding on stationary figs beneath trees. This flexibility in foraging behavior allowed *P. broadleyi* to utilize figs, a high energy but ephemeral resource. Lizards did not vary their foraging mode in response to insect-prey density, but attack distances were further at the site with lower insect density, as predicted by optimal foraging theory. Juveniles adopted an intermediate foraging mode irrespective of the resource utilized.

CAPE VERDE GIANT SKINKS

F. Andreone [2000, Herpetozoa 13(1/2):15-26] reports that in 1897 and 1898 the Italian naturalist Leonardo Fea made an expedition to western Africa, including the Cape Verde Archipelago. During his residence in the archipelago, he visited the islands of São Vicente, llhéu Raso, São Nicolau, Boavista, Santiago, Fogo, Brava, and Ilhéus do Rómbo. On Ilhéu Raso he collected some specimens of *Macroscincus coctei* (Duméril and Bibron, 1839), a giant skink currently considered as extinct. One hundred years later, the author of this paper visited some of these islands and made observations on their herpetofauna. Moreover, the presence of interesting specimens of the Cape Verde giant skink in the Italian natural history collections of Turin, Treviso, Genoa, and Florence, and their provenance are discussed. In particular, 32 specimens rediscovered in the museums at Turin and Treviso are referable to an importation by the Turinese herpetologist M. G. Peracca made in 1891. At the Genoa collection further specimens (partly referable to Fea's collections) are housed together with other not yet re-examined skinks and geckos from this archipelago. At the museum of Florence, a single specimen of *M. coctei* was found labeled São Vicente. This island was not known to be a part the range of *M. coctei*. Finally, the former distribution of *M. coctei* and aspects of its extinction are discussed.

PREDATORY BEHAVIOR OF NEONATE WATER SNAKES

B. A. Savitzky and G. M. Burghardt [2000, Herpetological Monographs 14:401-419] conducted two laboratory experiments to examine the predatory behavior of neonatal diamondback water snakes, *Nerodia rhombifer*. The first experiment determined habitat use and predatory behavior in three litters of prey- and habitat-naive neonates in small, naturalistic enclosures. The second experiment tested one litter of snakes at three ages from birth to one year in the same enclosures in order to determine ontogenetic changes in habitat use and predatory behavior. The neonates were highly aquatic, foraging only while in water. While negatively buoyant, they focused their activity at the surface of the water. Neonatal snakes were very successful at attacking live fish, capturing most by the head or repositioning them rapidly to a head-first position. The open-mouthed (OM) foraging behavior typical of adults was only rudimentarily developed. Ontogenetic changes in habitat use included a shift to less dense cover and increased use of open water. Ontogenetic changes in behavior included increased underwater activity and decreased surface activity, a higher rate of attacking, and shorter handling times, although snakes captured fewer fish by the head. OM foraging behavior developed, but was still abbreviated as compared to adults at the end of the year. Field studies corroborate the results of these studies.

SCRUB PYTHON SYSTEMATICS

M. B. Harvey et al. [2000, Herpetological Monographs 14: 139-185] revise the scrub pythons (i.e., the *Morelia amethistina* complex) based on museum specimens and new material recently collected in eastern Indonesia. *Morelia kinghorni* (formerly *M. amethistina kinghorni*) and *M. amethistina* (formerly *M. amethistina amethistina*) are recognized as species, and three new species are described: *M. clastolepis*, *M. nauta* and *M. tracyae*. The phylogenetic relationships of scrub pythons are resolved using morphological and molecular characters. Scrub pythons are most closely related to *Morelia boeleni* and have undergone both ancient divergences and a relatively recent radiation. The distribution of scrub pythons corresponds well with areas of endemism recognized in earlier studies of other taxa. Their distribution and evolution appears to have been shaped by combined effects of dispersal and vicariance. Scrub python populations exhibit interesting color and pattern polymorphism and ontogenetic change, and these characteristics vary among populations.

PREFERRED BODY TEMPERATURES OF YOUNG SNAKES

G. Blouin-Demers et al. [2000, Copeia (3):841-845] investigated whether the thermal history of black rat snakes (*Elaphe obsoleta*) and northern water snakes (*Nerodia sipedon*) during development affected their preferred body temperatures (PBTs) after hatching or birth. Eggs of black rat snakes were incubated at high or low temperatures. Gravid female water snakes were maintained in rooms under low, medium, or high ambient temperatures. PBTs of neonates were measured in a controlled thermal gradient. The authors found plasticity in PBTs with developmental temperature only for northern water snakes, where offspring that developed under warmer temperatures demonstrated a significant preference for warmer temperatures. The results suggest that PBTs are plastic in only some species of snakes and may explain some of the individual variation in PBTs observed in adult snakes.

DEFENSIVE BEHAVIORS OF CREVICE-DWELLING LIZARDS

W. E. Cooper, Jr., et al. [2000, Herpetologica 56(3):394-401] observed lizards in artificial crevices to examine behaviors that make it harder for predators to dislodge them from crevices or burrows. They used four focal species and made additional observations of 13 cordyliform species. There were pronounced differences in defensive behaviors within crevices among species. Within crevices, representatives of several lizard taxa pressed some portions of their dorsal surfaces against crevice roofs, pushing upward with their legs, and used the tail to block access to their bodies. Two species of cordylids also tilted their heads down, bringing the lower jaw into contact with the floor and pressing the neck and posterodorsal head against the roof. Additionally, *Uromastyx aegyptius* and *Sauromalus ater* wedged themselves into crevices by inflating their bodies. The authors discuss interspecific differences in within-crevice defenses in relation to the unique defensive repertoires of each taxon.

REPRODUCTION IN KUHL'S WART FROG

H. Tsuji and K.-Y. Lue [2000, Herpetologica 56(2):153-165] studied the reproductive ecology of female Kuhl's wart frog, *Rana* (*Limnonectes*) *kuhlii*, one of the fanged frogs, under natural conditions in subtropical Taiwan. Egg-laying by females of *R. kuhlii* occurred asynchronously throughout a three-month study period, and was aggregated at five sites along an 81-m transect of a small creek. *Rana kuhlii* is unusual among anurans in that females are generally smaller than their mates (67.6% of 34 amplexed pairs), and typically lay multiple clutches. Females each occupied stable residence sites along the transect during nonbreeding intervals, usually away from the main ovoposition sites. Amplexus or oviposition occurred on average 14.5 m (maximum 54.5 m) away from each female's residence site. The frequency of oviposition (including amplexus) was observed on average on 3.1 occasions for each female (maximum nine), and including presumed occasions (based on spatial movement patterns) was estimated to occur on average on 3.9 occasions (maximum 10), during the 50 nights surveyed. The interclutch period for each female averaged 12.7 days (minimum three days). Females laying multiple clutches usually laid at different sites and mated with different males for each clutch. Several aspects distinguish the multiple clutching of *R. kuhlii* from other anuran species laying multiple clutches. Possible explanations for the high frequency of oviposition by females of *R. kuhlii* are discussed.

EFFECTS OF MULTIPLE STRESSORS ON GRAY TREEFROG DEVELOPMENT

C. A. Britson and S. T. Threlkeld [2000, J. Iowa Acad. Sci. 107(3-4):61-66] examined the interactive effects of several stressors on the larval development of *Hyla chrysoscelis*. The stressors utilized included competition with *Rana sphenocephala*, UV radiation, methyl mercury, chlorpyrifos, and atrazine. Interactions among the stressors affected aspects of developmental outcome of the tadpoles. Among these were hatching success, development time, number of metamorphs, and incidence of malformations. The authors conclude that studies of causes of amphibian decline and malformations which fail to consider interactive effects of environmental stressors may lead to ineffective conservation efforts.

PHILIPPINE FLYING DRAGONS

J. A. McGuire and A. C. Alcala [2000, Herpetological Monographs 14:81-138] recognize 10 species of *Draco* in the Philippines including one (*Draco palawanensis*) described as new. For each species, a diagnosis, description of squamation and color pattern, and summaries of distribution and natural history are provided. Keys to the *Draco* of the Philippines are also provided. The geographic distributions of Philippine *Draco* species are largely concordant with aggregate island complexes formed when sea levels were lower in the late Pleistocene. The biogeography of Palawan Island is considered in the context of *Draco* and found to be inconsistent with the standard model treating Palawan as an extension of the Greater Sunda Shelf.

DIET OF A NEOTROPICAL PLETHODONTID

T. Bille [2000, Alytes 17(3-4):114-124] studied patterns in the diet of the Neotropical salamander *Pseudoeurycea leprosa* (Caudata, Plethodontidae) from Rio Frio, Mexico. The diet of this species varied depending on season and size class. Arthropods comprised the majority of the diet, but gastropods contributed a relatively large proportion as well. This species normally uses its projectable tongue to capture prey. However, smooth, soft-bodied oligochaete worms could not be captured this way, and salamanders instead used their jaws to capture such prey. Head shape changed during growth, with proportionately wider heads (relative to body size) in juveniles than adults. The larger heads of the juveniles allowed them to use a wider variety of prey. Overlap in prey sizes between size classes of salamanders was attributed to adult preference rather than the juveniles' ability to capture relatively larger prey. The author attributes the wider heads as a way to conserve space within the terrestrial egg rather than a way to exploit a greater trophic niche. Despite pronounced seasonal variation in precipitation, salamanders showed a great deal of dietary overlap between consequent seasons, and this could be an artifact of small sample size during the dry season, or could indicate microhabitat use.

ORINOCO CROCODILE MOVEMENTS

M. del C. Muñoz and J. Thorbjarnarson [2000, J. Herpetology 34(3):397-403] used radiotelemetry to monitor eight Orinoco crocodiles (*Crocodylus intermedius*), 103.3–139.3 cm total length, released in the Capanaparo River in southwestern Venezuela. The object of the study was to test the feasibility of using captive-reared crocodiles to restock depleted wild populations. Crocodiles were located every 1–2 d from April 1991 to March 1992 to determine movement patterns, survivorship, and growth rates. The crocodiles moved considerably during the first month following release, and the maximum distance moved was 11.6 km upstream by one crocodile four months after release. However, following an initial period of movement, crocodiles became more sedentary and by the end of the study the maximum distance from the point of release was less than 8 km. Six of the eight crocodiles moved upstream while two moved up to 3.3 km downstream. Crocodiles remained principally along the main course of the river in areas with mixed shallow and deep water habitats and abundant sand beaches. As the river rose during the wet season, crocodiles remained in the same areas, but moved into shallow-water areas among flooded riparian vegetation. The mean growth rate of released crocodiles (0.079 cm TL/day) was similar to that of smaller wild-born juvenile crocodiles. One animal was accidentally killed by a local resident who was hunting spectacled caiman. Based on the results of this study, the authors feel that a carefully designed program of releases of captive-reared crocodiles can be an effective conservation tool to speed the recovery of depleted populations of Orinoco crocodiles. However, care must be taken to insure that the release program is designed as one component of an overall crocodile strategy and not an excuse to avoid the onerous issues of the protection of wild crocodile populations and their habitat.

DORSAL COLORATION IN WALL LIZARDS

P. Galán [2000, Copeia (3):819-825] notes that adults of Bocage's wall lizard (*Podarcis bocagei*), a lacertid endemic to the northwestern Iberian Peninsula, generally show marked sexual dichromatism with males having green dorsal coloration and females brown dorsal coloration. In some populations, however, some adult females show dorsal coloration similar to that of males. The author used mark–recapture methods to study a population of this type on a coastal promontory in A Coruña. A proportion of adult females showed green dorsal coloration during the reproductive period (April–July), but not during the rest of the year. Green dorsal coloration was most frequent among females with oviductal eggs, whereas preovulatory females with vitellogenic follicles in all cases showed brown dorsal coloration. These findings suggest that the green dorsal coloration observed in some females may be related to stage in the reproductive cycle, with green coloration developing during the gravid phase (i.e., with fertilized eggs). The findings also raise the possibility that the function of this coloration may be to avoid harassment and copulation attempts by males following fertilization. According to this hypothesis, females show brown dorsal coloration during the receptivity period (and during the nonreproductive period). Following fertilization, and possibly as a result of the hormonal changes that accompany ovulation and fertilization, they develop green dorsal coloration. This suggests that coloration in these lacertids plays an important role in social communication.

AFRICAN EMERALD SNAKE BIOLOGY

L. Luiselli et al. [2000, Herpetozoa 13(1/2):3-14] report that the African emerald snake, *Gastropyxis smaragdina* (Schlegel, 1837), is a tropical African colubrid, characterized by emerald-green dorsal coloration, large eyes, and an extremely elongated tail (attaining > 50% of snout–vent length and > 35% of total length). It is widespread in the forested blocks of southern Nigeria (mainly east of the Niger River), where it was observed in a wide variety of habitats (including dry- and swamp-forests, mangroves, shrublands, plantations and farms, and suburbia). Application of a logistic regression model showed that the presence of *G. smaragdina* was significantly positively correlated with the presence of only two macro-environmental parameters (primary dry forest and secondary swamp forest), which suggests that the patchy mosaic of different types of deltaic forest is essential to support stable and abundant populations of this species. Activity was concentrated during the daylight hours, both in the wet and in the dry seasons. *Gastropyxis smaragdina* was frequently observed on the lower strata of forest tree canopies, but descended on the ground on several occasions. Females were approximately as long as males, but had shorter tails. Reproduction was seasonal and synchronous (matings during the wet season, oviposition during the dry season, and female frequency of reproduction annual). Clutch size (2–6 eggs) was positively correlated to maternal size. Both sexes fed mainly upon lizards (Scincidae, Gekkonidae, Agamidae; > 80% of dietary spectrum), but took also frogs (Hyperoliidae and Ranidae). Prey size was very small in comparison with snake size. Both arboreal and terrestrial animals of prey were taken.

RESPONSES TO FOOD CHEMICALS BY SOME GECKOS

W. E. Cooper, Jr., and J. J. Habegger [2000, J. Herpetology 34(3):360-368] note that in gekkonoid lizards, a few species of actively foraging eublepharids have been shown to identify prey chemicals by tongue-flicking and a few ambush foragers have been shown not to do so. Gekkonids in the omnivorous genus *Rhacodactylus* identify both plant and animal food by lingually sampling chemical cues. The authors conducted experiments with several species of geckos to provide further evidence on the evolutionary association between active foraging and lingually mediated prey chemical discrimination, to begin examination of the relationship between plant diet and chemosensory response to plant foods, and to examine the utility of palatable plant chemicals as a pungency control for studies of insectivores. Chemosensory discriminations were investigated by observing tongue-flicking and biting responses to cotton swabs bearing animal prey chemicals, palatable plant chemicals, and control substances. The eublepharids *Goniourosaurus luii* and *Eublepharis macularius* both responded strongly to cricket chemicals, but not to control stimuli, whereas the gekkonids *Gekko gecko* and *Uroplatus* were unresponsive to all cues. These data support and extend the evidence for correlated evolution between prey chemical discrimination and foraging mode. They provide support of limited scope for the hypotheses that insectivorous geckos do not respond to plant chemicals and that such responses evolve with inclusion of plants in the diet. The lack of any strong response to plant chemicals by insectivores indicates the potential usefulness of plant chemicals as pungency controls. Vomerolfactory discriminations are usually indicated by tongue-flicking, but several *G. luii* bit swabs bearing cricket chemicals without first tongue-flicking. This suggests that those individuals may have identified prey by olfaction, corroborating evidence for two other species of geckos.

POPULATION CHARACTERISTICS OF CRAYFISH FROGS IN ILLINOIS

M. Redmer [2000, J. Iowa Acad. Sci. 107(3-4):128-133] examined population characteristics of the crayfish frog (*Rana areolata)* in Williamson County, Illinois. Demographic (snout–vent length [SVL], skeletochronologically estimated age) and reproductive (fecundity, ova size) characteristics were examined in 59 frogs sampled from breeding choruses. Male age (mean = 3.53 yr) and female age (mean = 3.83 yr) were not significantly different, but male SVL (mean = 82.78 mm) was significantly smaller than that of females (mean = 89.61 mm). There were strong positive correlations between SVL and age for both males and females. Males mature earlier (youngest = 2 yr) than females (youngest = 3 yr). Mean clutch size was 4,868 ova. There was a strong positive correlation between female SVL and clutch size and a moderate positive correlation between female age and clutch size. Clutch size was inversely correlated with mean ovum size. *Rana areolata* is a species of some conservation concern in parts of the midwest United States, and the author recommends that monitoring efforts should include several life history stages and a variety of approaches.

WHY HATCHLING BLANDING'S TURTLES DON'T OVERWINTER IN THE NEST

G. C. Packard et al. [2000, Herpetologica 56(3):367-374] note that the equilibrium freezing point for body fluids of hatchling Blanding's turtles (*Emydoidea blandingii*) is near -0.7°C, but neonates that are held in a dry, ice-free environment can be (super)cooled to approximately -6°C before they begin to freeze spontaneously (i.e., by heterogeneous nucleation). Unfrozen turtles recover from exposure to -4°C, so the limit of supercooling (-6°C) probably approximates their limit of cold-tolerance. When hatchlings come into contact with ice in frozen soil, however, ice crystals penetrate the integument and cause body fluids to freeze at temperatures only slightly below the equilibrium freezing point. Freezing is fatal except at temperatures above -2.5°C. Temperatures in the soil are likely to go below -2.5°C during winter, so the risk of freezing and dying affords an explanation for why hatchling Blanding's turtles seldom overwinter in the natal nest.

VARIATION IN LOGGERHEADS

M. Tiwari and K. A. Bjorndal [2000, Herpetologica 56(3): 343-356] note that many studies have addressed intraspecific variation in life history traits in vertebrates. In this study they quantified differences in morphology and reproductive output of loggerhead sea turtles, *Caretta caretta*, nesting in Florida (temperate population), Brazil (tropical population), and Greece (Mediterranean population). Body size of nesting loggerheads, clutch size, egg size (diameter and mass), and nest dimensions were measured. Straight carapace lengths of nesting logger'neads in Florida and Brazil were not significantly different, but Greek turtles were smaller than those in the two Atlantic populations. Clutch size comparisons showed that Greek turtles produced the largest clutches relative to body size, followed by Brazil and Florida. Egg size varied significantly among the three populations. Nest dimensions were similar between Florida and Greece, whereas only depth of topmost egg and width of nest chamber were similar between Greece and Brazil. Differences among populations indicate that each population experiences and responds to a different combination of selective factors both at and away from the nesting beach. Morphological and reproductive data on other loggerhead populations were compiled from the literature and examined for latitudinal trends in all ocean basins and within the Atlantic–Mediterranean. A significant negative correlation was found between latitude and both body size and egg size in all ocean basins and within the Atlantic–Mediterranean. No correlation was found between clutch size and latitude. Correlations were not significant when Mediterranean data were excluded from the analyses, suggesting that sea turtles in the Mediterranean encounter environmental conditions significantly different from those experienced by oceanic populations. Reproductive output in loggerheads was found to support the optimal egg size theory. This study highlights important differences among populations and emphasizes the need for conserving genetic and phenotypic variation in marine turtle populations.

Unofficial Minutes of the CHS Board Meeting, October 20, 2000

The meeting was called to order at 7:34 P.M. Board members Karen Bielski, Greg Brim and Marcia Rybak were absent. Due to scheduling problems, Jack needed to adjourn the meeting at 9:00 P.M. He deferred the reading of the treasurer's report and of the minutes of the last board meeting to the end of the agenda. If time ran out, the reports would not be read at this meeting.

Officers' Reports

Recording Secretary: The minutes were distributed but not read.

Treasurer: Although Gary Fogel did not read the report, he distributed a seven-year review of income and expenses. The board members will discuss this at the coming retreat.

Membership Secretary: Mike Dloogatch distributed the report. There was a net increase of four members this month. Total membership was 819 as of the October mailing.

Vice-President: The program for the October general meeting will consist of discussion groups facilitated by CHS experts. Lisa Yerian will run the amphibian group. Ron Humbert will run the turtle group. Joan Moore will run the snake group. Rich Crowley will run the lizard group. Bob Bavirsha will rum the crocodilian group. Lori King said that several veterinarians have been contacted and may be able to attend. The group suggested several additional veterinarians that she could contact.

Lori said that Joe Frank is going to Washington, D.C., to do some lobbying against the Rattlesnake Roundups. The auction site is up and some quality items are on line and generating bids.

Lori reported from Gunther Kohler that the Utila Island government has promised 12 square kilometers of land for the iguana refuge. This includes enough mangrove swamp that none will need to be purchased. The money collected will be used to purchase coastal land (which is expensive) and to provide services.

Corresponding Secretary: Steve Spitzer said that someone called to find out where he can complain about Serpent Safari. Someone also called to state that the CHS phone message is not being updated. Steve said that he understands that the message has been being updated regularly, but that he will monitor this.

Publications Secretary: Marcia Rybak reported by E-mail that the transfer of the position of webmaster to Chris Lechowicz has been completed smoothly.

Standing Committees

Shows: Jenny Vollman confirmed that the Arlington Chicagoland Family Pet Show will take place March 16–18, the weekend before ReptileFest. Jack said that there are no guidelines for show exhibitors other than the ones being used for ReptileFest. The committee formed to review the guidelines will use these as a starting point.

Raffle: Jack requested that Gary Kostka continue to run the raffle through October 2001 in order to allow coordination between the symposium auction and the raffle. Gary agreed. Mike Dloogatch said that a CHS member who is leaving town has donated two SUVs full of equipment, which can be used for raffles. He requested help for storage. Jack and Gary volunteered. Ron Humbert mentioned that he had received a donation of 30 ten-gallon aquariums. He offered to bring some to each raffle.

Adoptions: Linda Malawy and Rich Crowley are coordinating their efforts smoothly. Iguanas, green treefrogs, Colombian boas, redtail boas and a Dumeril's boa are all available.

ReptileFest: Darin Croft confirmed that ReptileFest will take place on March 24–26, 2001. The contract with UIC is in the works. Gary Fogel suggested that flyers be ready by the end of the year. Lori King said that the announcement should be placed in *Reptiles* magazine as soon as possible. Applications for exhibitors should be sent out in the December *Bulletin*. Applications to vendors need to be sent out as well. Darin requested that anyone interested in being on the committee stay after the meeting to set a date for the first planning meeting.

Ad Hoc Committees

Nominating 2001: Ron Humbert announced that absentee ballots with the slate presented by the nominating committee have been sent out with the October *Bulletin*. Unfortunately there were no other nominations from the floor at the September general meeting. The group discussed ideas for activities which could be done during the voting. The nominating committee decided that videotapes from field trips taken by various members would be played.

Annual Awards: Sergeant-at-arms Greg Brim told Jack that the committee has made all the selections. Family members are being notified to insure that the recipients will attend.

Symposium 2001: Char Haguewood said that the contract with the Radisson has been signed and the deposit has been placed. There will be a meeting of anyone interested in helping with the symposium on November 4 at Mike Dloogatch's office. At the 2000 symposium, fliers were passed out. Representatives from each of the regional societies received them direct from Mike. Char described the schedule so far. On Friday evening there will be a breeders' sale, followed by a hospitality suite. Saturday will be a full day of speakers. On Saturday evening there will be the banquet with the featured speaker and the auction. On Sunday morning, there will be a Rattlesnake Roundup Panel. Other activities are still being planned. There will be guidelines set up for the breeders' expo. In Kansas City, the breeders show was extremely well attended.

Salamander Safari: Ron Humbert said that the Salamander Safari has taken place for the last two years, following a hiatus of several years. Last year, 50–60 people attended and all four of our area's salamander species were sighted. There was a

general consensus in the group to have the activity again in the coming year. It will take place from 9 A.M. to 1 P.M. on Saturday, March 31. Ron will coordinate it.

Old Business

Chicagoland Environmental Network: Char Haguewood will be sending the application for the CHS to join.

Mission–Vision–Values Retreat: Jack said the retreat will be held at Ivy Tech State College in Valparaiso, Indiana, on November 11 from 10 A.M. to 3 P.M. He distributed directions along with the agenda. He is hoping for at least 20 people to attend, with a number closer to 40 being optimal. He expects an open forum and a creative session. There will also be a working lunch. Steve Spitzer made a motion to allot up to $75 for lunch. Mike Dloogatch seconded. The motion carried unanimously.

New Business

Frog Call Tapes: Mike Redmer, representing Chicago Wilderness, sent an E-mail to Mike Dloogatch, copies of which were distributed to the board for discussion. Last year, Chicago Wilderness sponsored a survey of populations of the 13 species of frogs in wetlands in northeastern Illinois. The field counts were done by volunteers who were trained using a royalty-free Great Lakes area audiotape of frog calls. The quality was only fair; one species we have was missing and one species we don't have was present. There is an Illinois DNR tape but it also has quality issues. A very good quality tape can be commissioned from Lang Elliot who would charge for his labor only ($50/hr). He would produce a master CD from which the National Audubon Society would dub tapes to distribute to volunteers for a fee, which would include no profit. Lang Elliot could produce such a CD for as little as $500–600 to as much as $2500. The more costly tape would include sounds in addition to frog calls to help volunteers better distinguish the calls. The coordinators of the monitoring program plan to apply for a large grant in 2001 through Chicago Wilderness, but to qualify for the grant they would need to raise matching funds. Mike Redmer asked if the CHS was interested in funding the production of the CD as a local conservation project. Jack wondered if copies could be sold to CHS members to offset some of the costs. Mike Redmer will need to discuss this and other specifics with Lang Elliot, but is unsure if he will allow anyone to make monetary profit since he is essentially donating his creative property free of charge. Lori asked if there was an option in between the two costs. Mike Redmer there may be other options which would involve use of some material that has already been used for similar regional projects. Mike Dloogatch said that aside from the money, this is something the CHS should definitely be involved in, and he would certainly be willing to propose now that we provide $500 for the project. Jack asked if it would become known that the CHS contributed toward matching funds; Mike said that this would happen and also that the CHS would be acknowledged on the tapes. Lori suggested that this was an excellent project. Jack said we've been criticized for the last several years for not being conservation minded. Mike Redmer asked if he came back to the next meeting with three specific options, would the board be prepared to respond to it? The consensus was that we would. Training sessions for next year's volunteers are scheduled to begin in January.

Round Table

Darin Croft repeated that he would like to meet with anyone interested in working on ReptileFest after the meeting.

Mike Dloogatch passed around a thank-you card from Rita Mehta, one of the recipients of a CHS grant in 2000. She also donated several greeting cards to the raffle. We've had a few new members at each meeting. It would be helpful if board members could seek them out and welcome them. Mike made a motion to donate $100 to the Sherman A. Minton Student Transportation Award Committee. (This was discussed at the last board meeting but there was no quorum present to vote.) Jenny Vollman seconded. The motion carried unanimously.

Lori King asked that the board members be aware that their conversation in the back of the room during the general meeting is being heard throughout the room. One person in the audience even approached her during the meeting and asked if something was wrong. We need to take a seat during the meeting and take any conversation outside the room.

Steve Spitzer gave the members a list of dates for the board meetings from January 2001 to March 2002 and requested any proposed changes. He needs to notify the North Park Nature Center to schedule a meeting room.

The meeting adjourned at 9:00 P.M.

Respectfully submitted by Emily Forcade for
Recording Secretary Karen Bielski

Advertisements

For sale: Frozen rodents now available at the General Meeting starting July 26! Just another good reason to come to the meetings at the Chicago Academy of Sciences Patty Notebaert Nature Museum. Assorted sizes of rats and mice. Call Rich Crowley at (708) 485-5705 for details and pricing.

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. P.O. Box 85, Alpine TX 79831. Call us **toll-free** at (800) 720-0076 or visit our website: http://www.themousefactory.com.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: herp books. Sherman Minton, Jr.—*Amphibians and Reptiles of Indiana*, 1972 (first edition), 346 pp., distribution maps, keys, drawings, 53 b&w photos, softbound, $24; Robert H. Mount—*The Reptiles and Amphibians of Alabama*, 1975 (first printing), 347 pp., range maps, numerous b&w photos, softbound, $22; Vaughn Glasgow—*A Social History of the American Alligator*, 1991, 259 pp., many b&w photos and drawings, DJ, hardbound, an interesting account of the alligator from many perspectives, $20; Philip Jones—*Search for the Taipan*, 1981 (1977), 112 pp., 11 b&w photos, paperback, the story of Ram Chandra, $15; John Stackhouse—*Australia's Venomous Wildlife*, 1972 (1970), 144 pp., b&w color photos, DJ, hardbound, includes snakes, fish, spiders, shells and the platypus, $22; James A. Oliver—*The Natural History of North American Amphibians and Reptiles*, 1967 (1955), 359 pp., 74 figs., 12 b & w plates, DJ, corner of page 157 missing, otherwise excellent cond., hardbound, $30; Gunther Schmida—*The Cold-blooded Australians*, 1985, 208 pp., profusely illustrated with outstanding color photos (many full page size) of amphibians, reptiles, and freshwater fish and their habitats, treats animals by geographical area, DJ, as new condition, signed copy, hardbound, $80. All books in excellent condition. Prices postpaid. William R. Turner, 7395 S. Downing Circle W., Littleton CO 80122, (303) 795-5128; E-mail: turnerbmrk@prodigy.net.

For sale: Cleaning out my camera bag & making room for new equipment. The following are available (all include original boxes, leather cases, and instruction manuals): Canon EOS Rebel XS camera kit w/EOS 35–80 mm zoom lens, purchased as lightweight backup, body like new/rarely used, asking $200. Canon EOS Speedlight 380EX electronic flash unit, good condition, rarely used; excellent second or third flash unit for herp photographers who use multiple flash, asking $100. Canon EOS 2X teleconverter (fits only Canon EOS professional/"L" series lenses), good condition, asking $225. Asking $475 from anyone interested in all three items. Can deliver to CHS meeting or ship. Mike Redmer, (630) 668-0951; E-mail: mikeredmer@aol.com.

For sale: One-year-old captive-born armadillo lizards (*Cordylus cataphractus*), $400 each. Born Oct 1999, these lizards are the ones that roll up into a ball when frightened. They can be very long lived, up to 25 years and are easy to maintain. Gary Fogel, (773) 935-6938; E-mail: kordylus@juno.com.

For sale: My loss, your gain. Entire collection, racks/cages included. No reasonable offers refused. I am ready to sell. Reason for selling, losing/lost interest. Must sell snakes before racks and cages are sold. I have four 4-month-old ball pythons, eating and great health. I have one male and one female c.b. '97 poss. het albino Colombian boas (ready for this year never bred); one male and one female c.b. '98 (related) het albino Colombian boas, female is average, male is a beauty; one male and one female c.b. '96 Madagascar tree boas, gorgeous green, black & white (related & never bred); one male and two female c.b. '97 (proven) breeding trio of corns; one female c.b. '97 Pueblan milksnake; one male and one female c.b. '97 (related) patternless northern pines (ready to go this fall never bred); one male c.b. '96 high definition northern pine (gorgeous proven); one female c.b. '96 albino northern pine (beautiful proven); one male and one female c.b. '96 b/w high white kings (ready this fall never bred); one male c.b. '97 black king (*nitida* phase never bred); one male c.b. '98 anerythristic corn; one male and one female c.b. '97 het for hypo *splendida*s. Some Animals from Steve Snow Diversified Genetics; Madagascars are from Steve Hammack H.I.S.S. Buyer pays shipping. If interested please call Mike at (815) 547-9472. I live in the Rockford, Illinois, area, if you are interested in picking anything up. I would consider a cash/trade as well.

For sale: Why buy wild-caught royal pythons (*Python regius*) when you can buy healthy captive bred? I have babies available for $40 each, complete with history (hatch date, feeding dates, etc). Also, aberrant California kingsnakes for $25 each. All babies guaranteed feeding and sexed. Call Rich Crowley, (708) 485-5705 for details.

For sale: Brazilian rainbow boas—screaming red & orange babies, only five left, $125; "starburst" woma python—pick of the litter male, outstanding animal, $1250; 3½' female Argentine boa, $150; 4' striped male African rock python, $150; Pueblan milksnakes, c.b. '00, $35. All animals are captive born and are feeding on prekilled rodents. Mark Petros, Strictly Serpents, (847) 854-3259, E-mail: turbovixens1@prodigy.net.

For sale: Send SASE to CRC, P.O. Box 0731, Las Vegas NV 89125-0731 for brochures and list of species available. Limited bookings available for guided tours of herpetological collection sites in Nevada. Call/fax (702) 450-0065. URL http://www.herp.com/crc/ E-mail: crcsafetie@aol.com.

Tours: Adventure tours to Madagascar! Join **Bill Love** seeing and photographing fauna and flora, heavily herp-biased, across the world's least known mini-continent. Maximum fun & photo ops assured on every trip. Contact him at: BLUE CHAMELEON VENTURES, P.O. Box 643, Alva FL 33920. TEL: (941) 728-2390, FAX: (941) 728-3276, E-mail: blove@cyberstreet.com.

Tours: **Road-riding in Costa Rica!** Treat yourself to the trip of a lifetime! Learn about tropical herps, find them, photograph them, see where they live. **Greentracks, Inc.**, offers the best herpetological tours led by internationally acclaimed herpetologists and herpetoculturists. See the Amazon, visit cloud forests, experience the world's greatest rainforest, super sunsets and good company. Call (800) 9-MONKEY.

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: <MADadder0@aol.com>.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will begin at 7:30 P.M., Wednesday, November 29, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. The meeting will include the annual election of officers and members-at-large of the CHS Board of Directors. After the voting, members' slides and videos will be shown.

The December 27 general meeting will feature **Mike Redmer** speaking on "Building a Collection that Doesn't Eat: Photographing Amphibians and Reptiles." This presentation will discuss fundamentals of photography as they apply to amphibians and reptiles.

The Chicago Turtle Club

The next meeting of the Chicago Turtle Club will be Sunday, November 26, 1:00 – 3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Meetings are informal; questions, children and animals are welcome. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: http://www.geocities.com/~chicagoturtle.

NEW MEETING SITE

The regular monthly meetings of the Chicago Herpetological Society now take place at Chicago's newest museum—the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

DONATIONS TO THE SEPTEMBER 27 RAFFLE

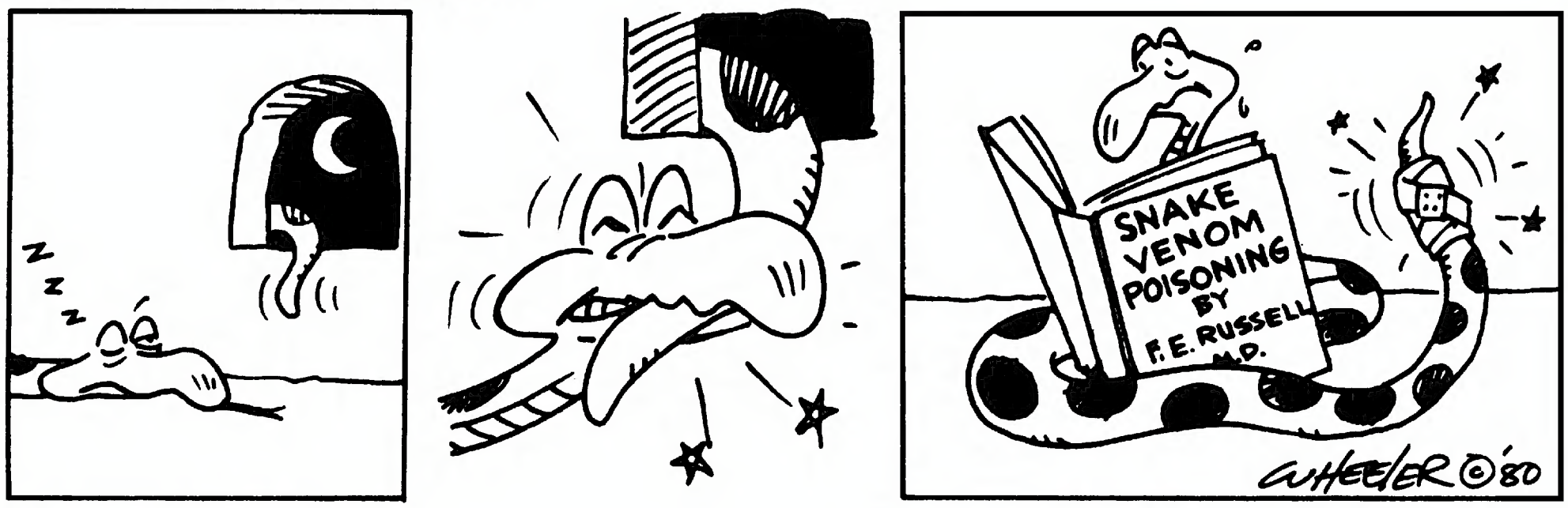
The following is a listing of those businesses and individuals who generously donated items for our monthly raffle at the September 27 meeting. The donated items are shown in parentheses.

Energy Savers Unlimited (NightLight); **Tetra Terrafauna** (Sizzle Stone Jr. / Vitolife supplement / ReptoMin floating food stix); **Freestyle Publications Ltd.** (*Pet Reptile* magazine); **West Indian Iguana Specialist Group** (T-shirt); **Midwest Zoological Supply** (NutriBACdf supplement); **Pretty Pets** (iguana food); **Sunshine Mealworms** (cricket gift certificate); **Timberline** (Easy Water cricket hydration gel); **Super Pet** (Hanging Gardens cage decor / Rock Pool Cover / ceramic dishes); **Hagen** (OrnamentAlls cage decor / Rept-o-meter hygrometer / Prime supplement / Repti-por odor remover); **Dr. Steve Barten** (Walking with Dinosaurs videotapes); **Randy Babb — Arizona Game and Fish Department** (Arizona rattlesnake poster); **Lori King** (porcelain covered bowl); **Ron & Dotty Humbert** (aquatic plants); **Mike Dloogatch** (herp finger puppets); **Karl & Erik Graff** (aquarium filter); **Jack Schoenfelder—Reptiques** (Audubon nature encyclopedias / herp jewelry); **Dr. Cheryl Roge—Best Friends Animal Hospital** (screen cover / light & husbandry supplies); **Ilene Sievert** (plants); **CHS** (book: *A Petkeeper's Guide to Reptiles and Amphibians* / herp posters).

MOVING??

Please let us know in plenty of time of any change in your mailing address. The *Bulletin of the Chicago Herpetological Society* is sent to our U.S. members by bulk-rate third class mail. This means that the U.S. Post Office will not forward your *Bulletin* with the rest of your mail. This is so even if you make a special request that your magazines be forwarded (such a request only applies to second class mail).

THE ADVENTURES OF SPOT



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